6 96

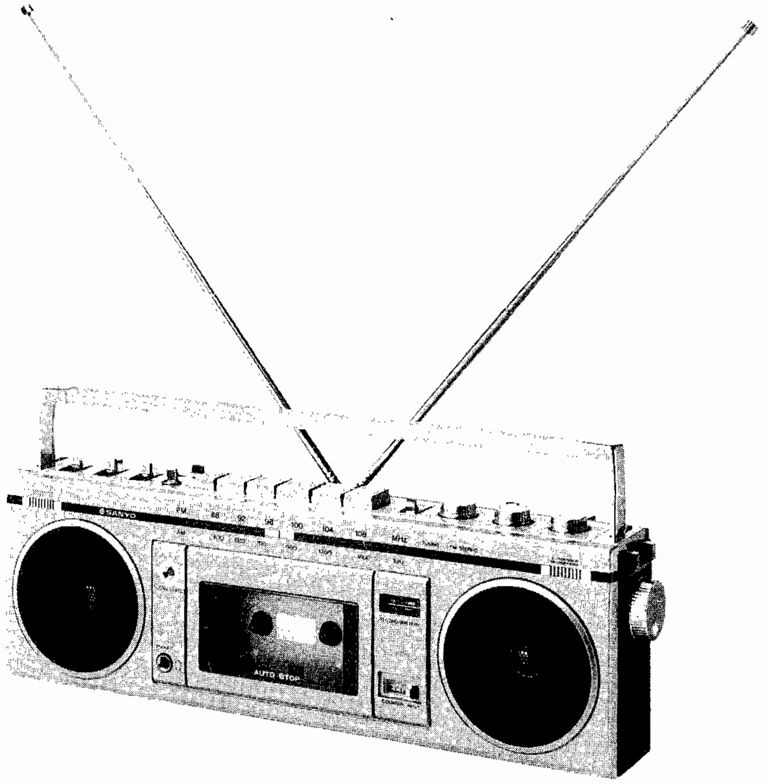
SERVICE MANUAL

SANYO

MINI AM/FM STEREO RADIO CASSETTE RECORDER

M7700F

EUROPE



141 888 02

SPECIFICATIONS

Recording System	AC Bias
Erasing System	AC Erasing
Tape Speed	1-7/8ips ±3%
Fast Forward Time	140sec. (C-60 cassette)
Rewind Time	140sec. (C-60 cassette)
Wow & Flutter	0.25% RMS
Frequency Response	
NORMAL	70 – 10,000Hz
Signal to Noise Ratio	
without DOLBY	Better than 48dB
Hum & Noise	Less than –55dBs (Min. Vol. and Tone)
Crosstalk	
Track to Track	Better than 50dB
Channel Separation	Better than 50dB
Distortion (3rd harmonic)	
NORMAL	5%

Terminal Impedance	
MIC	3.3k-ohm
DIN INPUT	3.3k-ohm
DIN OUTPUT	2.2k-ohm
EXT. Speaker	3.2 – 6ohm
Headphone	8ohm
Current Consumption (at Min. VR)	
RECORD mode	210mA
PLAY mode	160mA
F. FWD mode	180mA
REW mode	180mA
Output Power	2.0/chW (maximum)
Power Source	
DC	7.5V (UM-2, C Cell, HP 11, R14, Babyzellen x 5)
Frequency Range	
AM	515 – 1,630kHz
FM	88 – 108MHz

–Specifications subject to change without notice.–

WM-4143

6 96

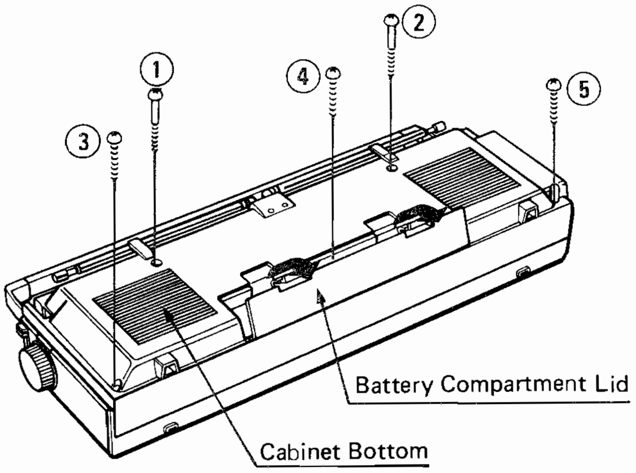
DISASSEMBLY INSTRUCTIONS

CABINET BOTTOM ASSEMBLY REMOVAL

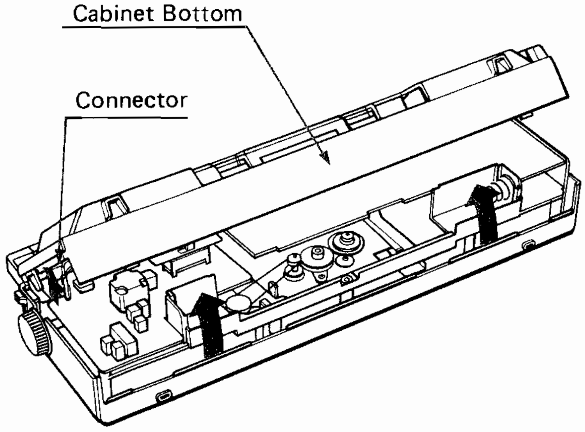
1. Take out the cassette tape from the compartment by pressing the STOP/EJECT button.

2. Turn over the unit on a soft surface and remove the battery compartment lid. Then, take out the five batteries from the unit.

3. Unscrew the five screws (1 – 5) fastening the Cabinet Bottom and lift the Cabinet Bottom as illustrated.


②
①
④
⑤
③
Battery Compartment Lid
Cabinet Bottom

4. Pull out the two connectors of the dipole antenna from the Radio Tuner P.C.Board. Then, remove the Cabinet Bottom.

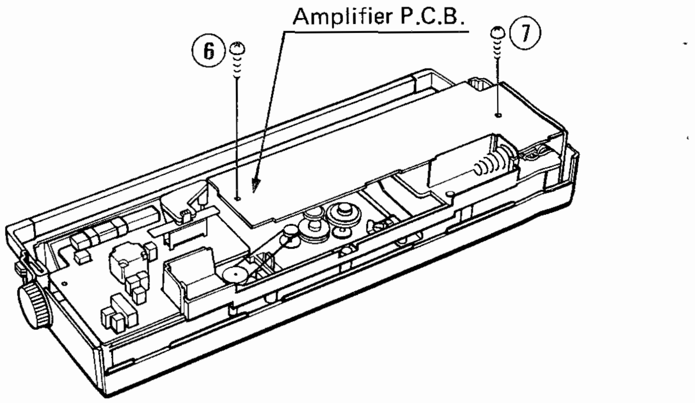

Cabinet Bottom
Connector

5. Reassemble in the reverse order.

AMPLIFIER P.C.BOARD ASSEMBLY REMOVAL

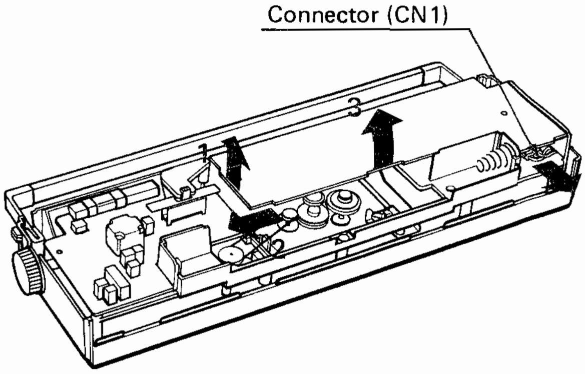
1. Follow the instructions for the Cabinet Bottom Assembly Removal.

2. Unscrew the two screws (6 & 7) fastening the P.C.Board.


Amplifier P.C.B.
⑥
⑦

3. Pull out the connector (CN1) from the P.C.Board.

4. Carefully remove the P.C.Board by lifting it in the numerical order as illustrated.

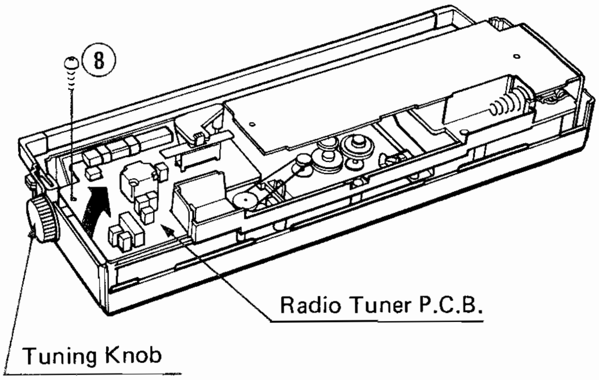

Connector (CN1)
3
1
2

5. Reassemble in the reverser order.

RADIO TUNER P.C.BOARD REMOVAL

1. Follow the instructions for the Cabinet Bottom Assembly Removal.

2. Turn the Tuning Knob fully in an arbitrary direction.


⑧
Radio Tuner P.C.B.
Tuning Knob

DISASSEMBLY INSTRUCTIONS (Continued)

3. Unscrew a screw (8) fastening the P.C.Board.

4. Remove the P.C.Board by lifting the tuning knob side of it.

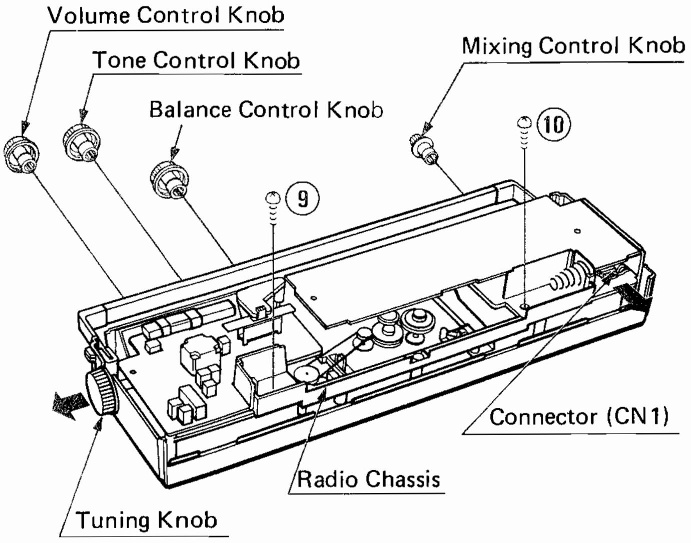
   NOTE:
   Do not turn the Tuning Knob before the Tuner P.C.Board is re-mounted to the unit.

5. Reassemble in the reverse order.

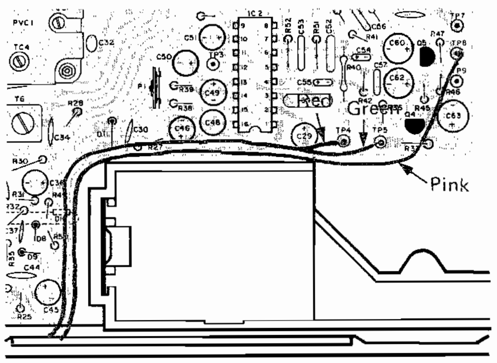
RADIO CHASSIS ASSEMBLY REMOVAL

1. Remove the Cabinet Bottom Assembly, Amplifier P.C.Board Assembly, and Tuner P.C.Board Assembly by following the instructions for them.

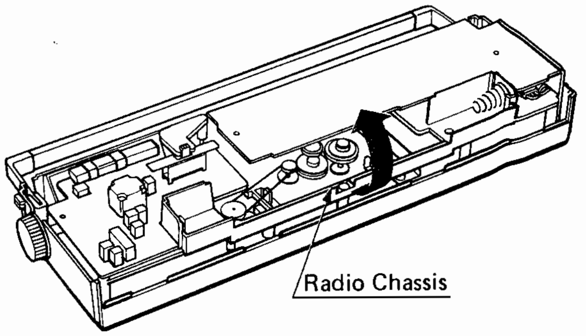
2. Pull out the Volume Control Knob, Tone Control Knob, Balance Control Knob, Mixing Control Knob, and Tuning Knob from the unit as illustrated.


Volume Control Knob
Tone Control Knob
Balance Control Knob
Mixing Control Knob
⑩
⑨
Connector (CN1)
Radio Chassis
Tuning Knob

3. Unsolder the three leads from the Radio Tuner P.C.Board and remove the connector (CN1) from the Amplifier P.C.Board as illustrated.


Red
Green
Pink

4. Unscrew the two screws (9 & 10) fastening the Radio Chassis and remove the Radio Chassis by tilting it as illustrated.

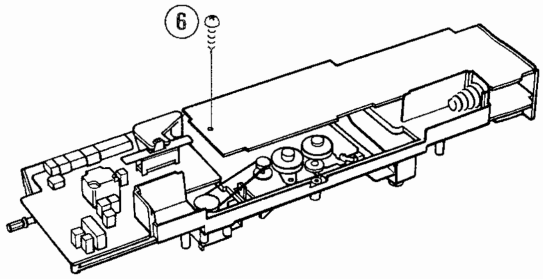

Radio Chassis

NOTE:
The Radio Chassis may be removed without unsoldering the leads. Remove the Radio Chassis noting the leads.

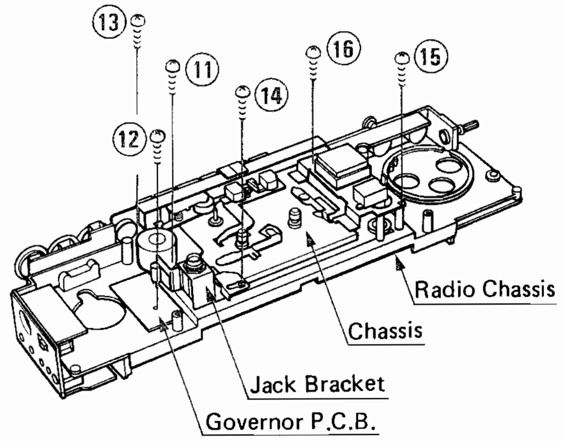
5. Reassemble in the reverse order.

CHASSIS ASSEMBLY REMOVAL

1. After removing the Cabinet Bottom and Radio Chassis, unscrew the screw (6) fastening the Amplifier P.C.Board. Then, turn over the Radio Chassis. See the illustration below.

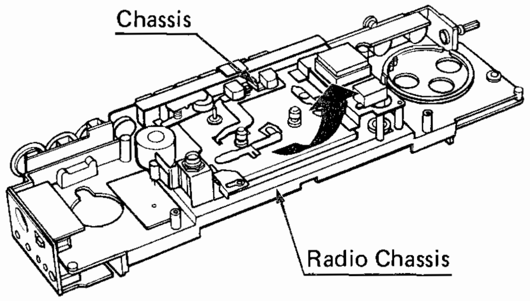


2. Unscrew the screw (11) fastening the Jack Bracket, the screw (12) fastening the Governor Circuit P.C.Board, and the screws (13 – 16) fastening the Chassis as illustrated.


⑬
⑪
⑯
⑮
⑭
⑫
Radio Chassis
Chassis
Jack Bracket
Governor P.C.B.

DISASSEMBLY INSTRUCTIONS (Continued)

3. After removing the Jack Bracket and the Governor Circuit P.C.Board, remove the Chassis as illustrated.

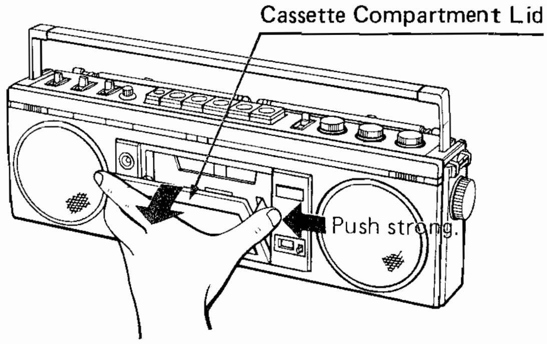


4. Reassemble in the reverse order.

CASSETTE COMPARTMENT LID REMOVAL

1. Open the cassette compartment lid by pressing the STOP/EJECT button.

2. To remove the cassette compartment lid, unlock the click of the cassette compartment lid from the Cabinet Top by pressing the counter side of the lid as illustrated.



NOTICE ON REASSEMBLY

1. When the unit is re-assembled, check to see that the lead wires do not touch the driving mechanism (Example: Flywheel, Pulley, and Belts etc.,).

2. When you solder the removed lead wires, please refer to the Wiring Diagram.

MECHANICAL ADJUSTMENTS

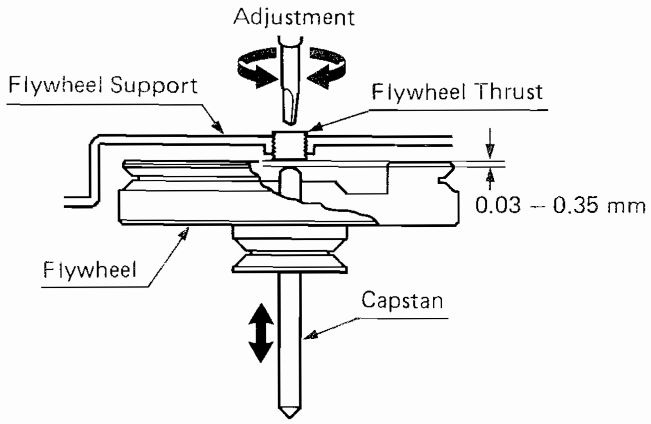
GENERAL REMARK

- Before adjusting the mechanism of this unit, wipe the tape contacting surfaces clean as well as the contact surfaces of the driving parts with a soft cloth soaked in alcohol.
  Trouble may occur because of oil and grease stains.
- Carefully handle the belt because grease easily attaches to it.

FLYWHEEL THRUST ADJUSTMENT

The clearance between the Flywheel Thrust and the Flywheel should be 0.03 – 0.35mm with the Chassis turned over.
If necessary, adjust the clearance by the following procedure.

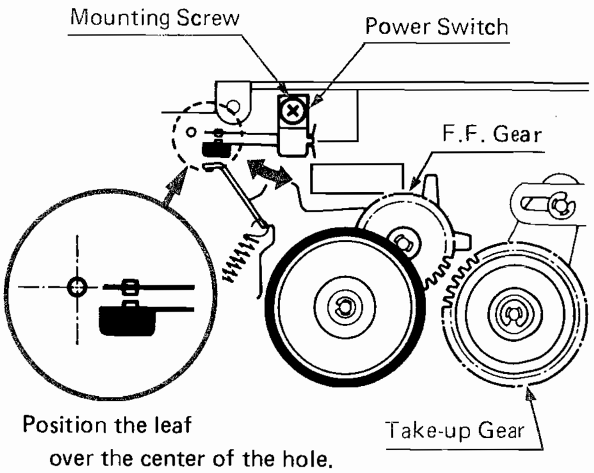
1. While moving the Capstan up and down, slowly turn the Flywheel Thrust clockwise to obtain the clearance of 0 between the Thrust and Flywheel.
   NOTE:
   Do not turn the Flywheel Thrust forcibly.



2. Turn the Thrust counter-clockwise by 45° from the position.
3. After the adjustment, secure the Thrust with paint or glue.

POWER SWITCH POSITION ADJUSTMENT

1. Check to see that the Power Switch is positioned over the center of the chassis adjusting hole as illustrated.



Position the leaf over the center of the hole.

2. If necessary, loosen the screw fastening the Switch and adjust the switch position by moving the Switch.
3. After tightening the screw, check the switch movement as follows:
   * Set the unit in the playback mode and slowly push the F.FWD button. Then, check that the Power Switch is changed over from "Close" to "Open", and that it is changed to "Close" again after the Take-up Gear meshes with the FF Gear.
4. Check that the Power Switch functions properly. Then, secure the screw with paint or glue.

ELECTRICAL ADJUSTMENTS

REQUIRED EQUIPMENTS

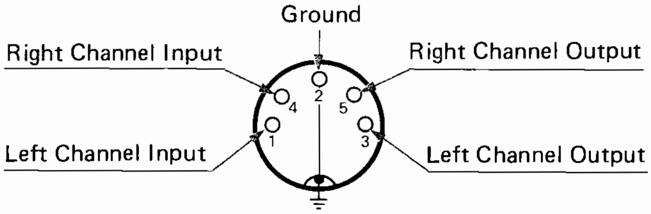
- VTVM (two sets)
- Frequency Counter
- Dummy Load (470 k-ohm)
- Dualtrace Synchroscope
- Test Tapes
  - * 3 kHz test Tape (TEAC MTT-111) for Tape Speed Adjustment
  - * 8 kHz Test Tape (TEAC MTT113C) for Head Azimuth Adjustment
  - * 1 kHz Test Tape (TEAC MTT-112B) for Playback Gain Adjustment
- DC Constant-Voltage Regulator
- Alignment Tool

Prior to the Electrical Adjustments, set the unit and the measuring instruments as follows:

- Function Switch . . . . TAPE
- Mode Switch . . . . STEREO
- Input Select Switch . . . . to REC/PB terminal
- Beat Cancel Switch 1
- DC Constant-Voltage Regulator Output . . . . 7.5 V DC

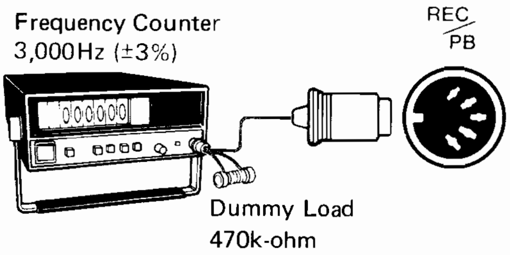
NOTE:

1. Perform each adjustment in the described order.
2. Obtain the output from the R/P DIN socket.
3. Supply 7.5 V DC from the constant-voltage regulator to the unit.
4. When obtaining the output from the R/P DIN socket, connect the leads noting the terminal numbers as illustrated.

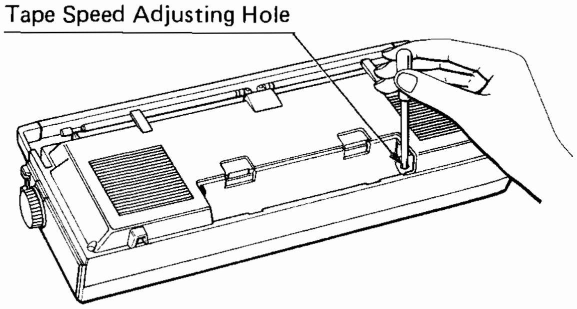

Ground
Right Channel Input
Right Channel Output
Left Channel Input
Left Channel Output
4
2
5
1
3

TAPE SPEED ADJUSTMENT

1. Remove the battery compartment lid and connect the frequency counter to the left or right channel output terminals of the R/P DIN socket as illustrated.

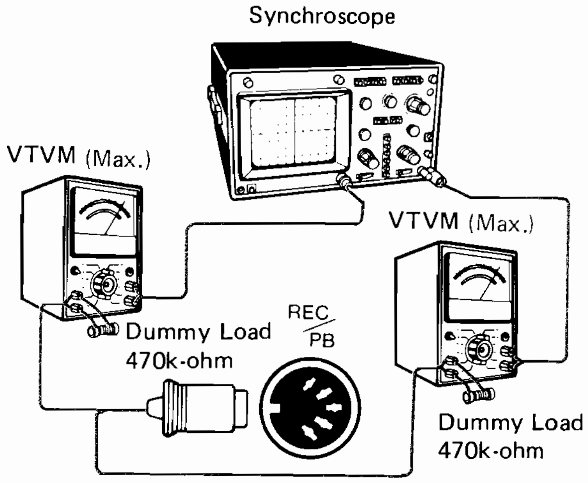

Frequency Counter
3,000Hz (±3%)
REC/PB
Dummy Load
470k-ohm

2. Insert the 3 kHz test tape (Example: TEAC MTT-111) into the compartment and play it back.
3. Adjust the tape speed by turning the potentiometer (P801) on the Governor Circuit P.C.Board with an alignment tool to obtain 3,000 Hz (±3%) on the frequency counter. See the illustration below.


Tape Speed Adjusting Hole

HEAD AZIMUTH ADJUSTMENT

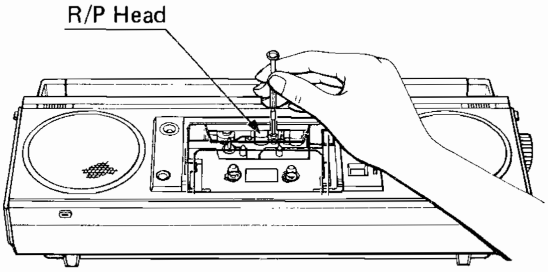
1. Remove the cassette compartment lid. Connect a VTVM and a dualtrace synchroscope to the R/P DIN socket as illustrated.


Synchroscope
VTVM (Max.)
VTVM (Max.)
Dummy Load
470k-ohm
REC/PB
Dummy Load
470k-ohm

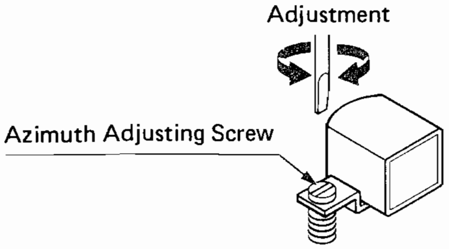
Set the synchroscope as follows:

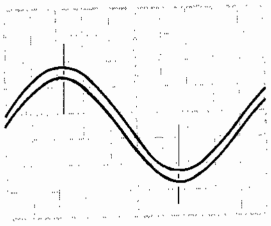
* MODE . . . . CHOP
* SOURCE . . . . INT (CH1 of CH2)
* SWEEP MODE . . . . AUTO

2. Insert the 8 kHz test tape (Example: TEAC MTT-113) into the compartment and play it back.
3. Slowly turn the azimuth adjusting screw until the amplitudes of both channel output wave forms become maximum and the wave forms overlap as well as possible in the maximum condition of the VTVM as illustrated.



ELECTRICAL ADJUSTMENTS (Continued)

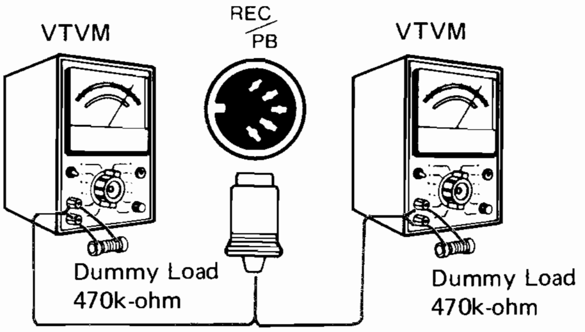

Adjustment
Azimuth Adjusting Screw



4. After the adjustment, secure the screw with paint or glue.

PLAYBACK GAIN ADJUSTMENT

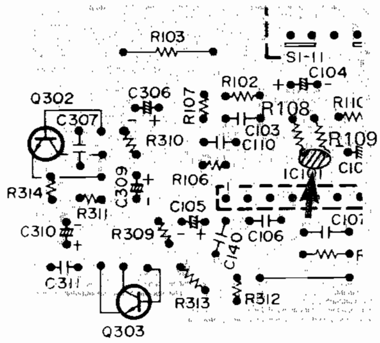
1. Connect the two sets of VTVM to the R/P DIN socket as illustrated and insert the 1 kHz test tape (Example: TEAC MTT-112B) into the compartment.


VTVM
REC/PB
VTVM
Dummy Load
470k-ohm
Dummy Load
470k-ohm

RIGHT CHANNEL

2. Check to see that the output of the right channel is 0.65 V (±0.1 V) with the unit in the playback mode.

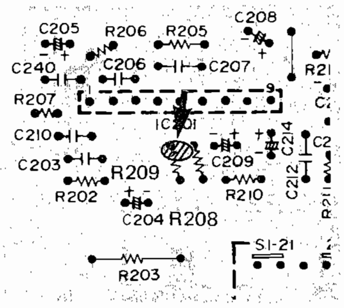
3. If necessary, ground the resistor R108 and/or R109 by soldering the pattern to obtain the specified output as illustrated.


R103
SI-11
C104
Q302
C306
R107
R102
R108
C307
R310
C103
C110
R109
R106
IC101
R314
C309
R311
C105
C310
R309
C140
C106
C311
R313
R312
Q303

LEFT CHANNEL

4. Adjust the output by grounding or separating the resistor R208 and/or R209 with the same method as RIGHT CHANNEL.

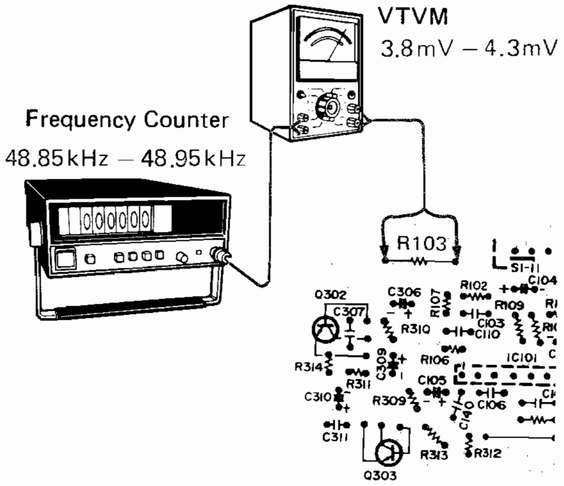
5. After the adjustment, check that the output difference between the right channel and the left channel is within 2 dB.


C205
R206
R205
C208
C240
C206
C207
R207
IC201
C210
C214
C203
R209
C209
R202
R210
C212
C204
R208
R203
SI-21

OSCILLATOR FREQUENCY AND RECORDING BIAS ADJUSTMENT

RIGHT CHANNEL

1. Connect the VTVM across R103, and the frequency counter to the output terminal of the VTVM as illustrated.

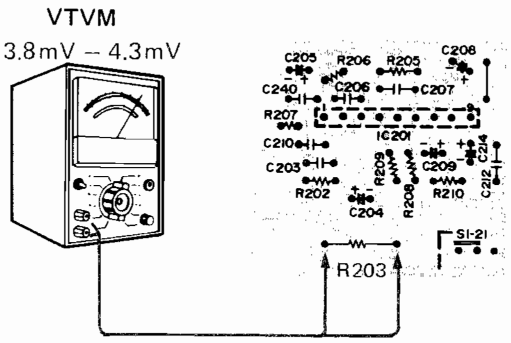

VTVM
3.8mV – 4.3mV
Frequency Counter
48.85kHz – 48.95kHz
R103
SI-11
Q302
C306
R102
C104
R109
C307
R310
C103
C110
R106
IC101
R314
C309
R311
C105
C310
R309
C106
C311
C140
R313
R312
Q303

2. Set the unit in the recording mode. Then, adjust the frequency by turning the core of the oscillator transformer (T301) with an alignment tool until the frequency counter reads 48.85 kHz – 48.95 kHz.

3. Adjust the potentiometer (P101) with the unit in the recording mode until the VTVM reads 3.8 mV – 4.3 mV (380 µA – 430 µA).

LEFT CHANNEL

Connect the VTVM across R203. Then, adjust the potentiometer (P201) until the VTVM reads 3.8 mV – 4.3 mV (380 µA – 430 µA).


VTVM
3.8mV – 4.3mV
C205
R206
R205
C208
C240
C206
C207
R207
IC201
C210
C214
C203
R209
C209
R202
R208
R210
C212
C204
SI-21
R203

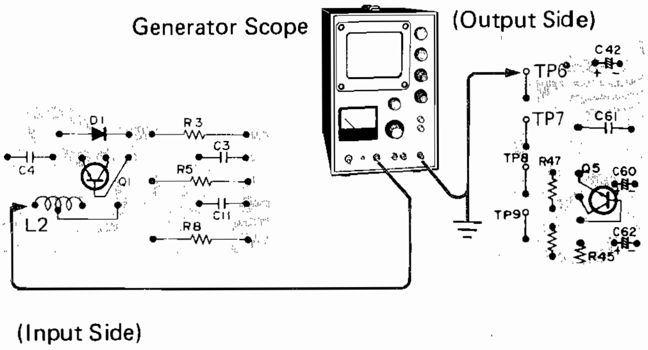
TUNER ADJUSTMENT

Measuring Instruments Required

- AM Standard-signal Generator
- FM Standard-signal Generator
- Generator Scope
- Stereo Signal Generator
- Loop Antenna
- Dummy Antenna (300 ohm, balanced type)
- VTVM
- Frequency Counter
- Distortion Meter
- Oscilloscope
- Dummy Load (3.2 ohm)
- Alignment Tool

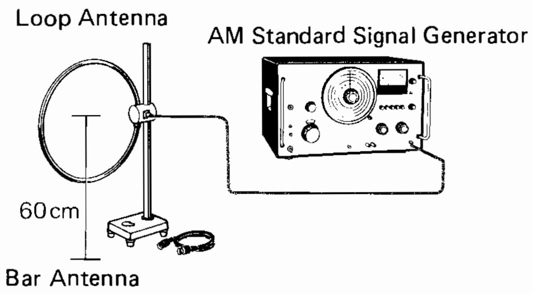
NOTE:
Set the Function Switch to RADIO (ON). Then, perform each alignment following the chart below.

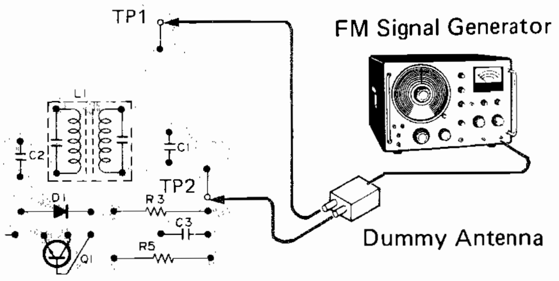
at FM alignment (Tuning Range and Tracking)

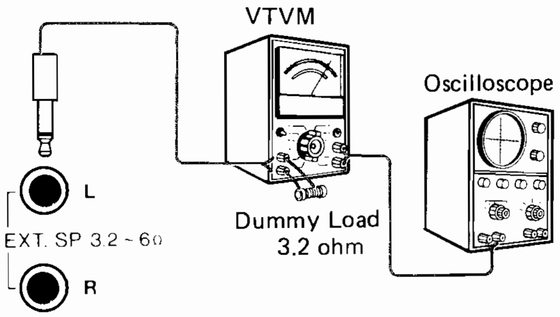

Generator Scope
(Output Side)
C42
TP6
TP7
C61
TP8
R47
Q5
C60
TP9
C62
R45
D1
R3
C3
C4
Q1
R5
C11
L2
R8
(Input Side)

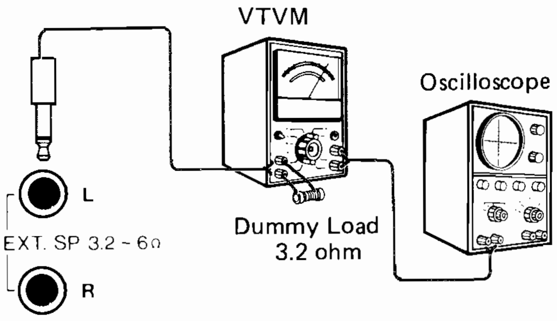
Measuring Instrument Connections

at AM alignment


Loop Antenna
AM Standard Signal Generator
60cm
Bar Antenna


TP1
FM Signal Generator
L1
C2
C1
TP2
D1
R3
C3
Q1
R5
Dummy Antenna

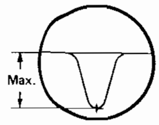
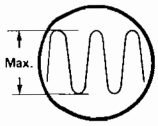

VTVM
Oscilloscope
L
EXT. SP 3.2 ~ 6Ω
R
Dummy Load
3.2 ohm


VTVM
Oscilloscope
L
EXT. SP 3.2 ~ 6Ω
R
Dummy Load
3.2 ohm

TUNER ADJUSTMENT (Continued)

AM ALIGNMENT

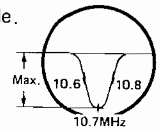
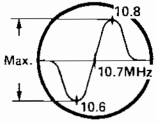
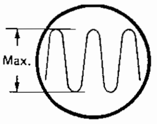
Standard test frequency 400 Hz and Modulation 30% at AM

Step	Alignment	Connections		Frequency of Signal Generator	Tuning Dial Setting	Adjustments	Remarks
		INPUT	OUTPUT				
1	Calibration of IF for AM	Connect standard loop antenna to output terminal of gene-scope. Place bar antenna 60 cm away from loop antenna.	Connect input terminal of gene-scope to detector output.	460 kHz	Low End	T5, T6, and T7	Obtain symmetrical curve and maximum amplitude. 
2	Calibration of Tuning Range	Connect standard loop antenna to output of signal generator. Place bar antenna 60 cm away from loop antenna.	Connect VTVM with 3.2 ohm dummy load and oscilloscope to Ext. speaker terminal.	505 kHz		T4	Obtain sine-wave of 400 Hz and maximum amplitude. 
3				1670 kHz	High End	PVC-TC4	
4	Adjustment of Tracking			600 kHz	600 kHz	L5 (MW bar ant, coil)	
5				1400 kHz	1400 kHz	PVC-TC3	
6	Repeat the above adjustments.						

* **Use a screwdriver with plastic grip for all adjustments.**

FM ALIGNMENT

Standard Test Frequency 400 Hz and Deviation 22.5 kHz

Step	Alignment	Connections		Frequency of Signal Generator	Tuning Dial Setting	Adjustment	Remarks
		INPUT	OUTPUT				
1	Calibration of IF	Place output of gene-scope on Trap Coil (L3).	Connect input terminal of gene-scope to detector output.	10.7 MHz	Low End	Turn T3 (blue core) fully counter-clockwise. T1 and T2	Obtain symmetrical curve and maximum amplitude. 
2						T3 (blue core)	Obtain S curve and maximum amplitude. 
3	Calibration of Tuning Range	Connect signal generator to antenna terminal through dummy antenna.	Connect VTVM with 3.2 ohm dummy load and oscilloscope to Ext. speaker terminal.	87.2 MHz		L4	Obtain sine-curve and maximum amplitude. 
4				109 MHz	High End	PVC-TC2	
5	Adjustment of Tracking			90 MHz	90 MHz	L2	
6				106 MHz	106 MHz	PVC-TC1	
7	Repeat the above adjustments.						

* **Use a screwdriver with plastic grip for all adjustments.**

TUNER ADJUSTMENT (Continued)

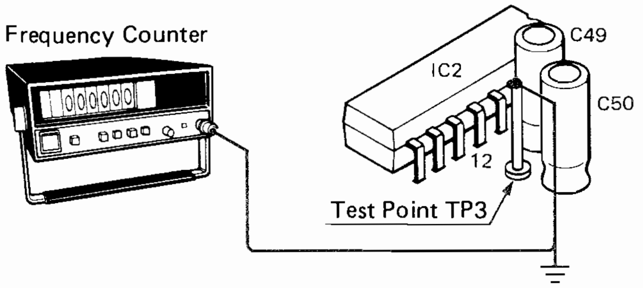
FM MULTIPLEX ADJUSTMENT

Prior to the adjustment, set the unit as follows:

Function Switch	RADIO (ON)
Band Select Switch	FM
Mode Switch	STEREO
Tone Control	MAXIMUM
Volume Control	Center

19 kHz (V.C.O.) ADJUSTMENT

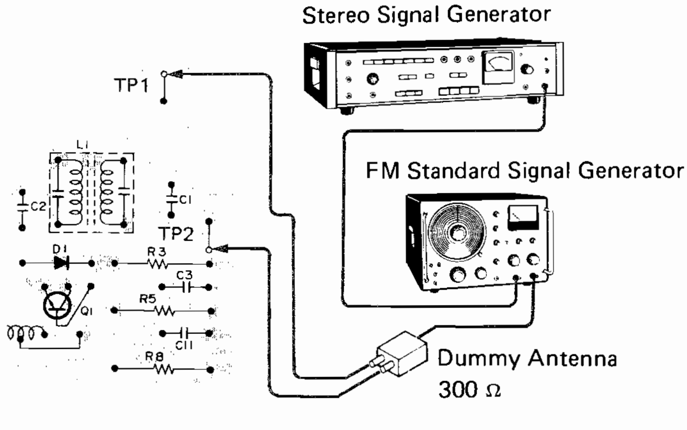
1. Connect the frequency counter to TP3 (twelfth pin) in IC2 as illustrated.


Frequency Counter
IC2
C49
C50
12
Test Point TP3

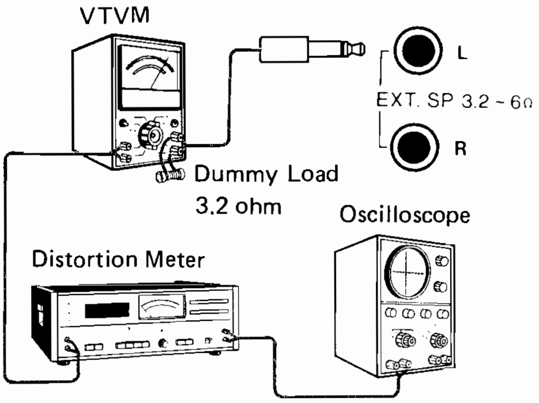
2. Adjust the potentiometer (P1) until the oscillation frequency of IC2 becomes 19 kHz (±20 Hz).

CHANNEL SEPARATION ADJUSTMENT

1. Insert the 300 ohm dummy antenna (balanced type) through the FM antenna terminals (TP1 and TP2) in the Radio Tuner P.C.Board as illustrated.


Stereo Signal Generator
TP1
L1
C2
C1
TP2
D1
R3
C3
R5
Q1
C11
R8
FM Standard Signal Generator
Dummy Antenna
300 Ω

2. Connect the VTVM with 3.2 ohm dummy load, distortion meter, and oscilloscope to the external speaker jack of the left channel as illustrated.


VTVM
L
EXT. SP 3.2 ~ 6Ω
R
Dummy Load
3.2 ohm
Oscilloscope
Distortion Meter

3. Adjust the input measuring instruments as follows:
   - Stereo Signal Generator
     - Pilot Signal .... 7.5 kHz dev. (modulation 10%)
     - Stereo Signal .... 67.5 kHz dev. for main signal (modulation 90%)
     - Modulation Frequency .... 400 Hz
   - FM Standard-signal Generator
     - Signal Generator Frequency .... 98 MHz
     - Signal Generator Output .... 66 dB

4. Perform the alignment following the chart on the next page.

TUNER ADJUSTMENT (Continued)

FM MPX ALIGNMENT **Standard test frequency 400 Hz and deviation 75 kHz**

Step	Alignment	Connections		Tuning Dial Setting	Adjustment	Remarks
		INPUT	OUTPUT			
1	FM Stereo Signal Separation	Main channel signal of Stereo SG ——ON	Connect VTVM with 3.2 ohm dummy load, distortion meter, and oscilloscope to L channel Ext. speaker terminal.	98 MHz	Tuning Dial	Maximize amplitude and VTVM reading.
2		Pilot and Sub channel signals of Stereo SG ——ON				Minimize distortion meter reading with maximum amplitude.
3		R channel and Pilot signals of Stereo SG ——ON			P2	Minimize amplitude and VTVM reading.
4	Repeat the above adjustments.					

* **Use a screwdriver with plastic grip for all adjustments.**

5. Re-connect the measuring instruments to external speaker jack and adjust the tuning knob and the potentiometer (P2) following the next chart.

FM MPX ALIGNMENT **Standard test frequency 400 Hz and deviation 75 kHz**

Step	Alignment	Connections		Tuning Dial Setting	Adjustment	Remarks
		INPUT	OUTPUT			
1	FM Stereo Signal Separation	Main channel signal of Stereo SG ——ON	Connect VTVM with 3.2 ohm dummy load, distortion meter, and oscilloscope to R channel Ext. speaker terminal.	98 MHz	Tuning Dial	Maximize amplitude and VTVM reading.
2		Pilot and Sub channel signals of Stereo SG ——ON				Minimize distortion meter reading with maximum amplitude.
3		L channel and Pilot signals of Stereo SG ——ON			P2	Minimize amplitude and VTVM reading.
4	Repeat the above adjustments.					

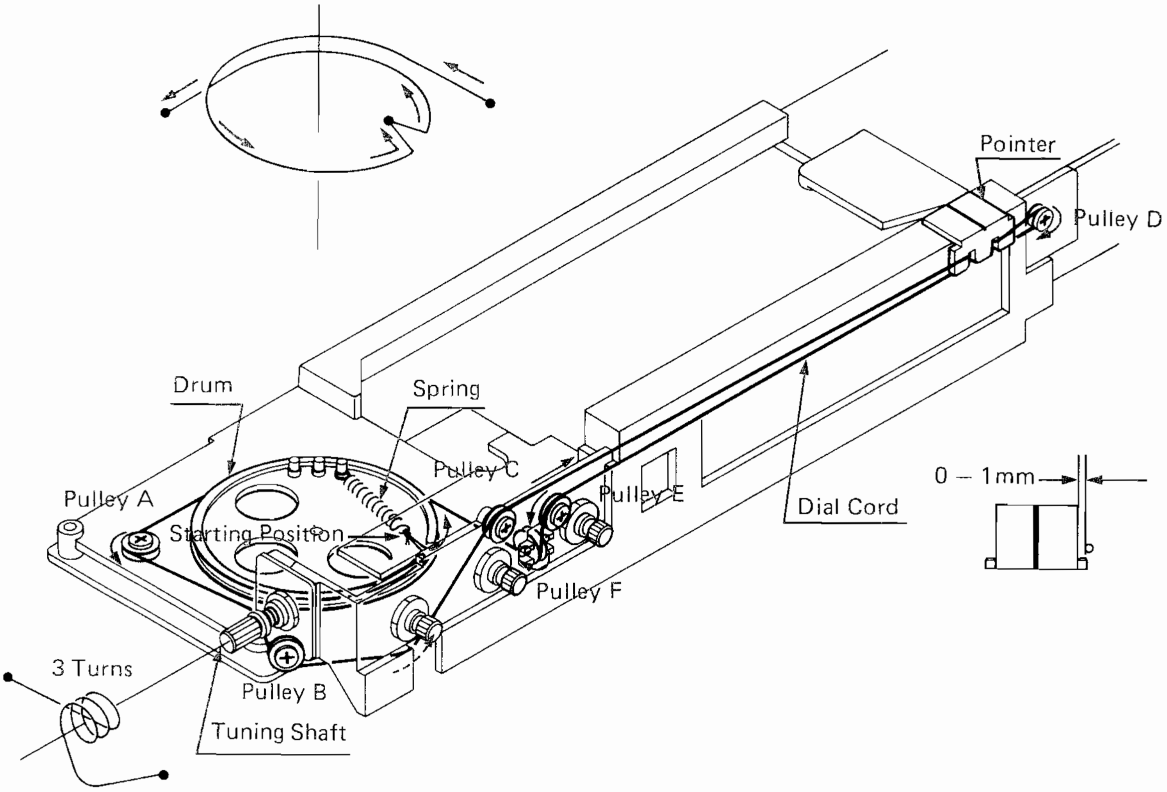
* **Use a screwdriver with plastic grip for all adjustments.**

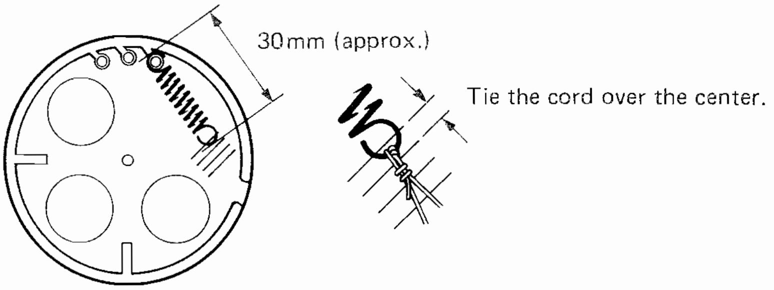
6. Repeatedly perform the adjustments in Items 5 and 6 to minimize the signal leakage for both right and left channels. Then, reduce the difference between each channel separation by adjusting the potentiometer (P2).

DIAL CORD STRINGING

DIAL CORD STRINGING

1. Mount the Radio Tuner P.C.Board on the Radio Chassis and then, the Drum to the shaft of the variable capacitor.
2. Tie the dial cord of length 1,050mm (effective length: 950 mm) and diameter $\phi 0.5$ to the spring and hook the spring to the illustrated position of the drum.
3. Engage the dial cord as illustrated in the following order. Drum ⇒ Pulley A ⇒ Tuner Shaft ⇒ Pulley B ⇒ Pulley C ⇒ Pulley D ⇒ Pulley E ⇒ Pulley F ⇒ Drum ⇒ Spring.
4. Hook the dial cord to the spring and tie the cord where the spring tip extends to the center between the two scratch marks on the drum. (Spring length becomes approximately 30 mm.)
5. Secure the place where the spring is hooked to the drum and the knot in the dial cord with paint or glue.
6. Turn the Tuning Shaft until it stops and set the pointer over the mark on the Radio Chassis as illustrated. Then, fix the pointer there.
7. Apply white lacquer to the pointer to secure.


Pointer
Pulley D
Drum
Spring
Pulley C
Pulley A
Starting Position
Pulley E
Dial Cord
0 – 1mm
Pulley F
3 Turns
Pulley B
Tuning Shaft


30mm (approx.)
Tie the cord over the center.

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
PACKAGE			
	141 2 1719 20300	Handle	1
	141 6 1419 42900	Individual Carton	1
	141 6 1449 60200	Case, Top	1
	141 6 1449 60300	Case, Bottom	1
	141 6 2519 10690	Poly Cover	1
	141 6 2519 23033	Poly Cover	1
	141 6 3119 19300	Handle Reinforce	1
	141 6 4559 00100	Serial No. Sheet	3
ACCESSORIES			
	4 2419 72222	Cassette	1
	141 6 4119 87900	Instruction Manual	1
CABINET			
SP1	4 1519 70790	Speaker	1
SP2	4 1519 70790	Speaker	1
MIC1	4 1539 70551	Microphone	1
MIC2	4 1539 70551	Microphone	1
	4 2359 70990	RT Pin Socket	2
CN1	4 2359 74151	Connector 4P Assy	1
	4 2449 70250	Rod Antenna	2
	141 0 1119 62002	Cabinet Bottom Assy	1
	141 0 1119 62100	Cabinet Top Complete	1
	141 0 1249 15000	Cassette Lid Assy	1
	141 0 1339 08100	Battery Lid Assy	1
	141 0 1719 08100	Handle Arm Assy	2
	141 0 5519 06600	Eject Gear Assy	1
	141 2 1149 19300	Speaker Screen	2
	141 2 1559 02601	L.E.D. Grille	1
	141 2 1719 19701	Handle	1
	141 2 2149 13000	Ribbon	1
	141 2 2449 30200	Sheet	2
	141 2 2719 11900	Handle Cover, Left	1
	141 2 2719 12000	Handle Cover, Right	1
	141 2 2719 12500	Handle Reinforce	1
	141 2 2899 11200	Tape Grille	1
	141 2 3729 00800	Fix Speaker Bracket	4
	141 2 4219 09800	Screw	2
	141 2 4419 13500	Cushion	1
	141 2 4539 05400	Washer	1
	141 2 4569 05100	Ring	1
	141 2 4729 03001	Lug	2
	141 2 7319 35500	Cum	1
	141 2 7519 42400	Shoulder Strap Shaft	2
	141 2 8519 78900	Spring, Cum	1
	141 2 1639 30500	Tuning Knob	1
	141 2 1639 30600	Volume Knob	3
	141 2 1639 30700	Microphone Volume Knob	1
R51	RD3 3 1251 JS000	Carbon 330 ohm 1/4W ±5%	1
	101 3 1202 60613	Screw, Flat Hd. +M2.6x6	2
	101 3 1302 60618	Screw, Pan Hd. +M2.6x6	2
	101 3 1302 60818	Screw, Pan Hd. +M2.6x8	2
	102 3 1303 00811	Screw, Pan Hd. Tapping-1 +M3.0x8	5
	112 3 1302 00012	E Ring M2	2
	143 3 1303 03018	Screw Pan Hd. Tapping-B +M3.0x30	3
D302	202 5 7900 02420	Diode, SLP-24B (Sound Level)	1
L.E.D. P.C.B. ASSY			
	4 2029 71090	L.E.D. P.C.B. Assy	1
D12	4 2029 70870	Diode, SLP-137B (FM Stereo)	1
D13	4 2029 70871	Diode, SLP-237B (Tuning)	1
	4 2269 31690	L.E.D. P.C.B.	1
RADIO TUNER P.C.B. ASSY			
	4 1259 71290	Radio Tuner P.C.B. Assy	1
	141 2 4729 04700	Staple 10	2
	141 2 4729 05000	Staple 5	3
	141 2 3229 23000	Shield Plate	1
	141 2 3229 26000	Tuner Shield Plate	1
	101 3 1302 60411	Screw, Pan Hd. +M2.6x4	2

Ref. No.	Part No.	Description	Q'ty
RADIO TUNER P.C.B. ASSY			
BF1	4 2539 70210	Ferrite Bead	1
CF1	4 2539 70440	Ceramic Filter	1
CF2	4 2539 70440	Ceramic Filter	1
C1	CI2 2 3250 KF00C	Boundary 0.022MF 25V ±10%	1
C2	CC1 0 1500 KD00C	Ceramic 100PF 50V ±10%	1
C3	CC2 2 3500 ZG00C	Ceramic 0.022MF 50V +80, −20%	1
C4	CC2 2 3500 ZG00C	Ceramic 0.022MF 50V +80, −20%	1
C5	CC1 0 3500 KE00C	Ceramic 0.01MF 50V ±10%	1
C6	CC4 0 A500 CD00C	Ceramic 4PF 50V ±0.2PF	1
C7	CC2 2 0500 JD00C	Ceramic 22PF 50V ±5%	1
C8	CC2 0 A500 CCH0C	Ceramic 2PF 50V ±0.2PF	1
C9	CC1 0 1500 KD00C	Ceramic 100PF 50V ±10%	1
C10	CC2 2 3500 ZG00C	Ceramic 0.022MF 50V +80, −20%	1
C11	CC2 2 3500 ZG00C	Ceramic 0.022MF 50V +80, −20%	1
C12	CC1 8 0500 JCH0C	Ceramic 18PF 50V ±5%	1
C13	CC1 5 0500 JCH0C	Ceramic 15PF 50V ±5%	1
C14	CC1 5 0500 JCH0C	Ceramic 15PF 50V ±5%	1
C15	CC1 0 0500 JCH0C	Ceramic 10PF 50V ±5%	1
C16	CC1 0 3500 KE00C	Ceramic 0.01MF 50V ±10%	1
C17	CC2 2 3500 ZG00C	Ceramic 0.022MF 50V +80, −20%	1
C18	CC5 0 A500 CCH0C	Ceramic 5PF 50V ±0.2PF	1
C19	CC2 2 3500 ZG00C	Ceramic 0.022MF 50V +80, −20%	1
C20	CC1 0 3500 ZG00C	Ceramic 0.01MF 50V +80, −20%	1
C21	CC2 2 3500 KE00C	Ceramic 0.022MF 50V ±10%	1
C22	CC2 2 3500 KE00C	Ceramic 0.022MF 50V ±10%	1
C23	CC2 5 0500 JD00C	Ceramic 25PF 50V ±0.2PF	1
C24	CC2 2 1500 KD00C	Ceramic 220PF 50V ±10%	1
C25	CC2 2 1500 KD00C	Ceramic 220PF 50V ±10%	1
C26	CD4 7 5100 0000V	Electrolytic 4.7MF 10V	1
C27	CB4 7 4100 0000V	Non-polar 0.47MF 10V	1
C28	CC2 2 3250 ZG00C	Ceramic 0.022MF 25V +80, −20%	1
C29	CD4 7 5100 0000V	Electrolytic 4.7MF 10V	1
C30	CC2 2 3500 ZG00C	Ceramic 0.022MF 50V +80, −20%	1
C31	CC2 2 3500 ZG00C	Ceramic 0.022MF 50V +80, −20%	1
C32	CC3 0 A500 CD00C	Ceramic 3PF 50V ±0.2PF	1
C33	CC2 2 3500 ZG00C	Ceramic 0.022MF 50V +80, −20%	1
C34	CC1 0 3500 ZG00C	Ceramic 0.01MF 50V +80, −20%	1
C35	CC2 2 3500 ZG00C	Ceramic 0.022MF 50V +80, −20%	1
C36	CD2 2 6100 0000V	Electrolytic 22MF 10V	1
C37	CC3 3 1500 KE00C	Ceramic 330PF 50V ±10%	1
C38	CI4 7 3250 KF00C	Boundary 0.047MF 25V +40, −20%	1
C39	CC2 2 3250 ZG00C	Ceramic 0.022MF 25V +80, −20%	1
C40	CD2 2 6100 0000V	Electrolytic 22MF 10V	1
C41	CI4 7 3250 KF00C	Boundary 0.047MF 25V +40, −20%	1
C42	CA2 2 4100 X000V	Aluminum 0.22MF 10V +40, −20%	1
C43	CC1 0 2500 KE00C	Ceramic 0.001MF 50V ±10%	1
C44	CC2 2 3500 ZG00C	Ceramic 0.022MF 50V +80, −20%	1
C45	CD2 2 6100 0000V	Electrolytic 22MF 10V	1
C46	CD1 0 7100 0001V	Electrolytic 100MF 10V	1
C47	CM4 7 3500 K00SV	Mylar 0.047MF 50V ±10%	1
C48	CS4 7 1500 J010F	Polystyrol 470PF 50V ±5%	1
C49	CA3 3 4100 X000V	Aluminum 0.33MF 10V +40, −20%	1
C50	CD1 0 5100 0000V	Electrolytic 1MF 10V	1
C51	CD2 2 5100 0000V	Electrolytic 2.2MF 10V	1
C52	CM1 0 3500 K00SV	Mylar 0.01MF 50V ±10%	1
C53	CM1 0 3500 K00SV	Mylar 0.01MF 50V ±10%	1
C54	CA2 2 4100 X000V	Aluminum 0.22MF 10V +40, −20%	1
C55	CA2 2 4100 X000V	Aluminum 0.22MF 10V +40, −20%	1
C56	CM3 3 2500 K00SV	Mylar 0.0033MF 50V ±10%	1
C57	CM3 3 2500 K00SV	Mylar 0.0033MF 50V ±10%	1
C58	CM5 6 2500 K00SV	Mylar 0.0056MF 50V ±10%	1
C59	CM5 6 2500 K00SV	Mylar 0.0056MF 50V ±10%	1
C60	CD1 0 7100 0001V	Electrolytic 100MF 10V	1
C61	CC2 2 3500 ZG00C	Ceramic 0.022MF 50V +80, −20%	1
C62	CD1 0 7100 0001V	Electrolytic 100MF 10V	1
C63	CD4 7 6100 0001V	Electrolytic 47MF 10V	1
D1	202 5 9040 44210	Diode, DS442	1
D2	205 5 9040 44210	Diode, DS442	1
D3	4 2029 70790	Diode, ITT410	1
D4	202 5 9110 18820	Diode, 1S188	1

PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
RADIO TUNER P.C.B. ASSY			
D5	202 5 9110 18820	Diode, 1S188	1
D6	205 5 9040 44210	Diode, DS442	1
D7	202 5 9110 18820	Diode, 1S188	1
D8	202 5 9110 18820	Diode, 1S188	1
D9	202 5 9110 18820	Diode, 1S188	1
D10	202 5 9110 18820	Diode, 1S188	1
D11	4 2029 70730	Diode, 05Z5.1 U	1
IC1	4 2069 70232	IC, µPC1018	1
IC2	4 2069 70500	IC, AN7410	1
L1	4 2579 70790	Antenna Coil	1
L2	4 2599 70334	RF Coil	1
L3	4 2659 70130	Loading Coil	1
L4	4 2589 70740	OSC Coil	1
L5	4 2579 70770	Bar Antenna	1
PVC1	4 2249 70192	Variable Condenser	1
P1	4 2229 72450	Potentiometer (B-10k)	1
P2	4 2229 72060	Potentiometer (B-30k)	1
Q1	4 2039 70380	Transistor, 2SC1674	1
Q2	4 2039 70460	Transistor, 2SC1675	1
Q3	4 2039 70460	Transistor, 2SC1675	1
Q4	4 2039 70100	Transistor, 2SC945	1
Q5	4 2039 70100	Transistor, 2SC945	1
R1	RD2 7 1251 JS000	Carbon 270 ohm 1/4W ±5%	1
R2	RD1 0 4251 JS000	Carbon 100k ohm 1/4W ±5%	1
R3	RD1 0 4251 JS000	Carbon 100k ohm 1/4W ±5%	1
R4	RD2 7 2251 JS000	Carbon 2.7k ohm 1/4W ±5%	1
R5	RD4 7 1251 JS000	Carbon 470 ohm 1/4W ±5%	1
R6	RD1 0 1251 JS000	Carbon 100 ohm 1/4W ±5%	1
R7	RD1 0 4121 JH000	Carbon 100k ohm 1/8W ±5%	1
R8	RD1 0 4251 JS000	Carbon 100k ohm 1/4W ±5%	1
R9	RD5 6 2251 JS000	Carbon 5.6k ohm 1/4W ±5%	1
R10	RD1 0 1251 JS000	Carbon 100 ohm 1/4W ±5%	1
R11	RD1 0 1251 JS000	Carbon 100 ohm 1/4W ±5%	1
R12	RD1 0 4251 JS000	Carbon 100k ohm 1/4W ±5%	1
R13	RD1 5 4251 JS000	Carbon 150k ohm 1/4W ±5%	1
R14	RD2 2 1251 JS000	Carbon 220 ohm 1/4W ±5%	1
R15	RD5 6 2251 JS000	Carbon 5.6k ohm 1/4W ±5%	1
R16	RD3 3 4251 JS000	Carbon 330k ohm 1/4W ±5%	1
R17	RD2 2 1251 JN000	Carbon 220 ohm 1/4W ±5%	1
R18	RD4 7 0251 JN000	Carbon 47 ohm 1/4W ±5%	1
R19	RD8 2 1121 JH000	Carbon 820 ohm 1/8W ±5%	1
R20	RD1 0 1251 JS000	Carbon 100 ohm 1/4W ±5%	1
R21	RD1 0 2251 JN000	Carbon 1k ohm 1/4W ±5%	1
R22	RD1 0 2251 JN000	Carbon 1k ohm 1/4W ±5%	1
R23	RD4 7 2251 JN000	Carbon 4.7k ohm 1/4W ±5%	1
R24	RD4 7 2251 JN000	Carbon 4.7k ohm 1/4W ±5%	1
R25	RD5 6 3251 JN000	Carbon 56k ohm 1/4W ±5%	1
R26	RD3 3 4251 JN000	Carbon 330k ohm 1/4W ±5%	1
R27	RD4 7 0251 JN000	Carbon 47 ohm 1/4W ±5%	1
R28	RD1 0 3251 JN000	Carbon 10k ohm 1/4W ±5%	1
R29	RD4 7 0251 JN000	Carbon 47 ohm 1/4W ±5%	1
R30	RD4 7 0251 JN000	Carbon 47 ohm 1/4W ±5%	1
R31	RD4 7 3251 JN000	Carbon 47k ohm 1/4W ±5%	1
R32	RD1 0 3251 JN000	Carbon 10k ohm 1/4W ±5%	1
R33	RD2 2 2251 JN000	Carbon 2.2k ohm 1/4W ±5%	1
R34	RD4 7 2251 JN000	Carbon 4.7k ohm 1/4W ±5%	1
R35	RD1 0 2251 JN000	Carbon 1k ohm 1/4W ±5%	1
R36	RD1 5 4251 JN000	Carbon 150k ohm 1/4W ±5%	1
R37	RH2 2 1501 JH000	Metal 220 ohm 1/2W ±5%	1
R38	RD1 8 3251 JN000	Carbon 18k ohm 1/4W ±5%	1
R39	RD1 0 2251 JN000	Carbon 1k ohm 1/4W ±5%	1
R40	RD8 2 1251 JS000	Carbon 820 ohm 1/4W ±5%	1
R41	RD1 0 2251 JN000	Carbon 1k ohm 1/4W ±5%	1
R42	RD1 0 2251 JN000	Carbon 1k ohm 1/4W ±5%	1
R43	RD1 0 2251 JS000	Carbon 1k ohm 1/4W ±5%	1
R44	RD1 0 2251 JS000	Carbon 1k ohm 1/4W ±5%	1
R45	RD5 6 A251 JN000	Carbon 5.6 ohm 1/4W ±5%	1
R46	RD4 7 1251 JN000	Carbon 470 ohm 1/4W ±5%	1
R47	RD5 6 A251 JN000	Carbon 5.6 ohm 1/4W ±5%	1
R48	RD1 8 3251 JN000	Carbon 18k ohm 1/4W ±5%	1

Ref. No.	Part No.	Description	Q'ty
RADIO TUNER P.C.B. ASSY			
R49	RD1 0 3251 JN000	Carbon 10k ohm 1/4W ±5%	1
R50	RD5 6 1251 JN000	Carbon 560 ohm 1/4W ±5%	1
R52	RD3 3 3251 JN000	Carbon 33k ohm 1/4W ±5%	1
R53	RD3 3 3251 JN000	Carbon 33k ohm 1/4W ±5%	1
S7	4 2319 71154	Slide Switch (Record/Play)	1
TP1	4 2369 70740	RT Pin	1
TP2	4 2369 70740	RT Pin	1
TP3	4 2369 70740	RT Pin	1
TP4	4 2369 70740	RT Pin	1
TP5	4 2369 70740	RT Pin	1
TP6	4 2369 70740	RT Pin	1
TP7	4 2369 70740	RT Pin	1
TP8	4 2369 70740	RT Pin	1
TP9	4 2369 70740	RT Pin	1
TP10	4 2369 70740	RT Pin	1
TP11	4 2369 70740	RT Pin	1
T1	4 2569 70850	IFT	1
T2	4 2569 70320	IFT	1
T3	4 2569 70330	IFT	1
T4	4 2589 70510	OSC Transformer	1
T5	4 2569 70910	IFT AM	1
T6	4 2569 70920	IFT AM	1
T7	4 2569 70720	IFT	1
	4 2569 70740	IFT Case	1
AMPLIFIER P.C.B. ASSY			
	4 1329 74671	Amplifier P.C.B. Assy	1
CN1	4 2369 71571	Connector 4P	1
	141 2 4729 04700	Staple 10	9
	141 2 4729 05000	Staple 5	7
	141 2 4729 05800	Staple 15	4
C101	CA1 0 4100 M000V	Aluminum 0.1MF 10V ±20%	1
C102	CC2 2 3500 ZG00C	Ceramic 0.022MF 50V +80, −20%	1
C103	CC1 5 2500 KE00C	Ceramic 0.0015MF 50V ±10%	1
C104	CD4 7 5100 0000V	Electrolytic 4.7MF 10V	1
C105	CD4 7 6100 0001V	Electrolytic 47MF 10V	1
C106	CC5 6 1500 KE00C	Ceramic 560PF 50V ±10%	1
C107	CC2 2 1500 KD00C	Ceramic 220PF 50V ±10%	1
C108	CD1 0 7100 0001V	Electrolytic 100MF 10V	1
C109	CD4 7 663A 0001V	Electrolytic 47MF 6.3V	1
C110	CC1 2 2500 KE00C	Ceramic 0.0012MF 50V ±10%	1
C111	CC3 3 1500 KE00C	Ceramic 330PF 50V ±10%	1
C112	CM1 8 3500 K00SV	Mylar 0.018MF 50V ±10%	1
C113	CC1 2 2500 KE00C	Ceramic 0.0012MF 50V ±10%	1
C114	CD1 0 6100 0000V	Electrolytic 10MF 10V	1
C115	CD3 3 663A 0001V	Electrolytic 33MF 6.3V	1
C116	CD2 2 5100 0000V	Electrolytic 2.2MF 10V	1
C117	CC3 9 1500 KE00C	Ceramic 390PF 50V ±10%	1
C118	CC1 0 1500 KD00C	Ceramic 100PF 50V ±10%	1
C119	CD1 0 763A 0001V	Electrolytic 100MF 6.3V	1
C120	CC5 6 1500 KE00C	Ceramic 560PF 50V ±10%	1
C121	CM1 2 3500 K00SV	Mylar 0.012MF 50V ±10%	1
C122	CD1 0 6100 0000V	Electrolytic 10MF 10V	1
C123	CD4 7 4100 0000V	Electrolytic 0.47MF 10V	1
C124	CD2 2 5100 0000V	Electrolytic 2.2MF 10V	1
C125	CC2 2 3500 ZG00C	Ceramic 0.022MF 50V +80, −20%	1
C129	CD4 7 4100 0000V	Electrolytic 0.47MF 10V	1
C130	CC1 0 2500 KE00C	Ceramic 0.001MF 50V ±10%	1
C131	CD1 0 7100 0001V	Electrolytic 100MF 10V	1
C132	CD3 3 7100 0001V	Electrolytic 330MF 10V	1
C133	CD1 0 6100 0000V	Electrolytic 10MF 10V	1
C134	CC1 0 1500 KD00C	Ceramic 100PF 50V ±10%	1
C135	CD4 7 4100 0000V	Electrolytic 0.47MF 10V	1
C136	CD4 7 6100 0001V	Electrolytic 47MF 10V	1
C137	CD1 0 863A 0001V	Electrolytic 1000MF 6.3V	1
C138	CD4 7 7160 0001V	Electrolytic 470MF 16V	1
C139	CC3 3 1500 KE00C	Ceramic 330PF 50V ±10%	1
C140	CC2 2 1500 KD00C	Ceramic 220PF 50V ±10%	1
C201	CA1 0 4100 M000V	Aluminum 0.1MF 10V ±20%	1
C202	CC2 2 3500 ZG00C	Ceramic 0.022MF 50V +80, −20%	1

PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
AMPLIFIER P.C.B. ASSY			
C203	CC1 5 2500 KE00C	Ceramic 0.0015MF 50V ±10%	1
C204	CD4 7 5100 0000V	Electrolytic 4.7MF 10V	1
C205	CD4 7 6100 0001V	Electrolytic 47MF 10V	1
C206	CC5 6 1500 KE00C	Ceramic 560PF 50V ±10%	1
C207	CC2 2 1500 KD00C	Ceramic 220PF 50V ±10%	1
C208	CD1 0 7100 0001V	Electrolytic 100MF 10V	1
C209	CD4 7 663A 0001V	Electrolytic 47MF 6.3V	1
C210	CC1 2 2500 KE00C	Ceramic 0.0012MF 50V ±10%	1
C211	CC3 3 1500 KE00C	Ceramic 330PF 50V ±10%	1
C212	CM1 8 3500 K00SV	Mylar 0.018MF 50V ±10%	1
C213	CC1 2 2500 KE00C	Ceramic 0.0012MF 50V ±10%	1
C214	CD1 0 6100 0000V	Electrolytic 10MF 10V	1
C215	CD3 3 663A 0001V	Electrolytic 33MF 6.3V	1
C216	CD2 2 5100 0000V	Electrolytic 2.2MF 10V	1
C217	CC3 9 1500 KE00C	Ceramic 390PF 50V ±10%	1
C218	CC1 0 1500 KD00C	Ceramic 100PF 50V ±10%	1
C219	CD1 0 763A 0001V	Electrolytic 100MF 6.3V	1
C220	CC5 6 1500 KE00C	Ceramic 560PF 50V ±10%	1
C221	CM1 2 3500 K00SV	Mylar 0.012MF 50V ±10%	1
C222	CD1 0 6100 0000V	Electrolytic 10MF 10V	1
C223	CD4 7 4100 0000V	Electrolytic 0.47MF 10V	1
C224	CD2 2 5100 0000V	Electrolytic 2.2MF 10V	1
C225	CC2 2 3500 ZG00C	Ceramic 0.022MF 50V +80, −20%	1
C229	CD4 7 4100 0000V	Electrolytic 0.47MF 10V	1
C230	CC1 0 2500 KE00C	Ceramic 0.001MF 50V ±10%	1
C231	CD1 0 7100 0001V	Electrolytic 100MF 10V	1
C232	CD3 3 7100 0001V	Electrolytic 330MF 10V	1
C233	CD1 0 6100 0000V	Electrolytic 10MF 10V	1
C234	CC1 0 1500 KD00C	Ceramic 100PF 50V ±10%	1
C235	CD4 7 4100 0000V	Electrolytic 0.47MF 10V	1
C236	CD4 7 6100 0001V	Electrolytic 47MF 10V	1
C237	CD1 0 863A 0001V	Electrolytic 1000MF 6.3V	1
C238	CD4 7 7160 0001V	Electrolytic 470MF 16V	1
C239	CC3 3 1500 KE00C	Ceramic 330PF 50V ±10%	1
C240	CC2 2 1500 KD00C	Ceramic 220PF 50V ±10%	1
C301	CP1 8 2101 J000V	Polypropylene 0.0018MF 100V ±5%	1
C302	CM2 2 3500 K00SV	Mylar 0.022MF 50V ±10%	1
C303	CM6 8 2500 K00SV	Mylar 0.0068MF 50V ±10%	1
C304	CM2 2 3500 K00SV	Mylar 0.022MF 50V ±10%	1
C305	CD1 0 7100 0001V	Electrolytic 100MF 10V	1
C306	CD1 0 5100 0000V	Electrolytic 1MF 10V	1
C307	CC4 7 1500 KE00C	Ceramic 470PF 50V ±10%	1
C308	CD1 0 6100 0000V	Electrolytic 10MF 10V	1
C309	CD4 7 4100 0000V	Electrolytic 0.47MF 10V	1
C310	CD1 0 5100 0000V	Electrolytic 1MF 10V	1
C311	CC4 7 1500 KE00C	Ceramic 470PF 50V ±10%	1
C312	CA1 0 4100 M000V	Aluminum 0.1MF 10V ±20%	1
C314	CD4 7 6100 0001V	Electrolytic 47MF 10V	1
C315	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
D101	205 5 9040 44210	Diode, DS442	1
D102	205 5 9040 44210	Diode, DS442	1
D103	205 5 9110 18810	Diode, 1S188	1
D104	202 5 9110 18810	Diode, 1S188	1
D105	205 5 9040 44210	Diode, DS442	1
D106	205 5 9040 44210	Diode, DS442	1
D201	205 5 9040 44210	Diode, DS442	1
D202	205 5 9040 44210	Diode, DS442	1
D203	202 5 9110 18810	Diode, 1S188	1
D204	202 5 9110 18810	Diode, 1S188	1
D205	205 5 9040 44210	Diode, DS442	1
D206	205 5 9040 44210	Diode, DS442	1
D301	202 5 9110 18810	Diode, 1S188	1
IC101	4 2069 70071	IC, TA7137P	1
IC102	206 5 1164 13510	IC, LA4135	1
IC201	4 2069 70071	IC, TA7137P	1
IC202	206 5 1164 13510	IC, LA4135	1
J1	4 2359 73470	Jack 1P (Ext. Microphone, Right)	1
J2	4 2359 71780	Jack 1P (Ext. Microphone, Left)	1
J3	4 2359 73470	Jack 1P (Ext. Speaker, Right)	1

Ref. No.	Part No.	Description	Q'ty
AMPLIFIER P.C.B. ASSY			
J4	4 2359 73470	Jack 1P (Ext. Speaker, Left)	1
J5	4 2359 73540	External Power Socket (Ext. Power Socket)	1
L101	4 2559 70031	Coil (33 mH)	1
L201	4 2559 70031	Coil (33 mH)	1
P101	4 2229 72973	Potentiometer (B-300k)	1
P201	4 2229 72973	Potentiometer (B-300k)	1
Q101	4 2039 70430	Transistor, 2SC1815	1
Q102	4 2039 70430	Transistor, 2SC1815	1
Q103	203 5 5100 53650	Transistor, 2SC536	1
Q104	203 5 5100 53650	Transistor, 2SC536	1
Q201	4 2039 70430	Transistor, 2SC1815	1
Q202	4 2039 70430	Transistor, 2SC1815	1
Q203	203 5 5100 53650	Transistor, 2SC536	1
Q204	203 5 5100 53650	Transistor, 2SC536	1
Q301	203 5 6940 54550	Transistor, 2SD545	1
Q302	203 5 5100 69362	Transistor, 2SC693	1
Q303	4 2039 70430	Transistor, 2SC1815	1
Q304	203 5 5100 53650	Transistor, 2SC536	1
Q305	203 5 5100 53650	Transistor, 2SC536	1
R101	RD4 7 2251 JN000	Carbon 4.7k ohm 1/4W ±5%	1
R102	RD3 3 2251 JN000	Carbon 3.3k ohm 1/4W ±5%	1
R103	RD1 0 0251 JS000	Carbon 10 ohm 1/4W ±5%	1
R105	RD1 2 3251 JN000	Carbon 12k ohm 1/4W ±5%	1
R106	RD5 6 3251 JN000	Carbon 56k ohm 1/4W ±5%	1
R107	RD1 0 2251 JN000	Carbon 1k ohm 1/4W ±5%	1
R108	RD6 8 1251 JN000	Carbon 680 ohm 1/4W ±5%	1
R109	RD3 9 1251 JN000	Carbon 390 ohm 1/4W ±5%	1
R110	RD6 8 2251 JN000	Carbon 6.8k ohm 1/4W ±5%	1
R111	RD1 0 4251 JN000	Carbon 100k ohm 1/4W ±5%	1
R112	RD6 8 2251 JN000	Carbon 6.8k ohm 1/4W ±5%	1
R113	RD1 2 3251 JN000	Carbon 12k ohm 1/4W ±5%	1
R115	RD1 0 3251 JN000	Carbon 10k ohm 1/4W ±5%	1
R116	RD1 0 3251 JN000	Carbon 10k ohm 1/4W ±5%	1
R117	RD3 3 3251 JN000	Carbon 33k ohm 1/4W ±5%	1
R118	RD1 0 1251 JN000	Carbon 100 ohm 1/4W ±5%	1
R119	RD4 7 2251 JN000	Carbon 4.7k ohm 1/4W ±5%	1
R120	RD3 3 5251 JN000	Carbon 3.3M ohm 1/4W ±5%	1
R121	RD1 0 2251 JN000	Carbon 1k ohm 1/4W ±5%	1
R122	RD3 3 1251 JN000	Carbon 330 ohm 1/4W ±5%	1
R123	RD4 7 2251 JN000	Carbon 4.7k ohm 1/4W ±5%	1
R124	RD1 5 2251 JN000	Carbon 1.5k ohm 1/4W ±5%	1
R125	RD1 0 1251 JN000	Carbon 100 ohm 1/4W ±5%	1
R126	RD2 2 2251 JN000	Carbon 2.2k ohm 1/4W ±5%	1
R129	RD4 7 A251 JN000	Carbon 4.7 ohm 1/4W ±5%	1
R130	RD1 8 2251 JN000	Carbon 1.8k ohm 1/4W ±5%	1
R131	RD3 9 2251 JN000	Carbon 3.9k ohm 1/4W ±5%	1
R132	RD4 7 0251 JN000	Carbon 47 ohm 1/4W ±5%	1
R133	RD2 2 2251 JS000	Carbon 2.2k ohm 1/4W ±5%	1
R135	RD2 7 2251 JN000	Carbon 2.7k ohm 1/4W ±5%	1
R136	RD1 2 3251 JN000	Carbon 12k ohm 1/4W ±5%	1
R137	RD2 2 2251 JN000	Carbon 2.2k ohm 1/4W ±5%	1
R201	RD4 7 2251 JN000	Carbon 4.7k ohm 1/4W ±5%	1
R202	RD3 3 2251 JN000	Carbon 3.3k ohm 1/4W ±5%	1
R203	RD1 0 0251 JS000	Carbon 10 ohm 1/4W ±5%	1
R205	RD1 2 3251 JN000	Carbon 12k ohm 1/4W ±5%	1
R206	RD5 6 3251 JN000	Carbon 56k ohm 1/4W ±5%	1
R207	RD1 0 2251 JN000	Carbon 1k ohm 1/4W ±5%	1
R208	RD6 8 1251 JN000	Carbon 680 ohm 1/4W ±5%	1
R209	RD3 9 1251 JN000	Carbon 390 ohm 1/4W ±5%	1
R210	RD6 8 2251 JN000	Carbon 6.8k ohm 1/4W ±5%	1
R211	RD1 0 4251 JN000	Carbon 100k ohm 1/4W ±5%	1
R212	RD6 8 2251 JN000	Carbon 6.8k ohm 1/4W ±5%	1
R213	RD1 2 3251 JN000	Carbon 12k ohm 1/4W ±5%	1
R215	RD1 0 3251 JN000	Carbon 10k ohm 1/4W ±5%	1
R216	RD1 0 3251 JN000	Carbon 10k ohm 1/4W ±5%	1
R217	RD3 3 3251 JN000	Carbon 33k ohm 1/4W ±5%	1
R218	RD1 0 1251 JN000	Carbon 100 ohm 1/4W ±5%	1
R219	RD4 7 2251 JN000	Carbon 4.7k ohm 1/4W ±5%	1
R220	RD3 3 5251 JN000	Carbon 3.3M ohm 1/4W ±5%	1
R221	RD1 0 2251 JN000	Carbon 1k ohm 1/4W ±5%	1

PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
AMPLIFIER P.C.B. ASSY			
R222	RD3 3 1251 JN000	Carbon 330 ohm 1/4W ±5%	1
R223	RD4 7 2251 JN000	Carbon 4.7k ohm 1/4W ±5%	1
R224	RD1 5 2251 JN000	Carbon 1.5k ohm 1/4W ±5%	1
R225	RD1 0 1251 JN000	Carbon 100 ohm 1/4W ±5%	1
R226	RD2 2 2251 JN000	Carbon 2.2k ohm 1/4W ±5%	1
R229	RD4 7 A251 JN000	Carbon 4.7 ohm 1/4W ±5%	1
R230	RD1 8 2251 JN000	Carbon 1.8k ohm 1/4W ±5%	1
R231	RD3 9 2251 JN000	Carbon 3.9k ohm 1/4W ±5%	1
R232	RD4 7 0251 JN000	Carbon 47 ohm 1/4W ±5%	1
R233	RD2 2 2251 JN000	Carbon 2.2k Ohm 1/4W ±5%	1
R235	RD2 7 2251 JN000	Carbon 2.7k ohm 1/4W ±5%	1
R236	RD1 2 3251 JN000	Carbon 12k ohm 1/4W ±5%	1
R237	RD2 2 2251 JN000	Carbon 2.2k ohm 1/4W ±5%	1
R301	RD3 9 1251 JN000	Carbon 390 ohm 1/4W ±5%	1
R302	RD2 2 1251 JN000	Carbon 220 ohm 1/4W ±5%	1
R303	RD2 2 2251 JS000	Carbon 2.2k ohm 1/4W ±5%	1
R304	RD2 2 2251 JN000	Carbon 2.2k ohm 1/4W ±5%	1
R305	RD5 6 A251 JN000	Carbon 5.6 ohm 1/4W ±5%	1
R306	RD1 0 3251 JN000	Carbon 10k ohm 1/4W ±5%	1
R307	RD2 7 0251 JN000	Carbon 27 ohm 1/4W ±5%	1
R308	RD1 0 1251 JN000	Carbon 100 ohm 1/4W ±5%	1
R309	RD1 0 3251 JN000	Carbon 10k ohm 1/4W ±5%	1
R310	RD1 0 5251 JN000	Carbon 1.0M ohm 1/4W ±5%	1
R311	RD1 5 1251 JN000	Carbon 150 ohm 1/4W ±5%	1
R312	RD3 3 2251 JN000	Carbon 3.3k ohm 1/4W ±5%	1
R313	RD3 9 4251 JN000	Carbon 390k ohm 1/4W ±5%	1
R314	RD1 2 1251 JN000	Carbon 120 ohm 1/4W ±5%	1
R315	RD3 9 2251 JN000	Carbon 3.9k ohm 1/4W ±5%	1
R316	RD5 6 3251 JN000	Carbon 56k ohm 1/4W ±5%	1
R317	RD6 8 1251 JN000	Carbon 680 ohm 1/4W ±5%	1
R318	RD6 8 2251 JN000	Carbon 6.8k ohm 1/4W ±5%	1
R319	RD8 2 2251 JN000	Carbon 8.2k ohm 1/4W ±5%	1
R320	RD3 3 1251 JS000	Carbon 330 ohm 1/4W ±5%	1
T301	4 2589 71460	OSC Transformer	1
S1	4 2319 73470	Slide Switch (Record/Playback)	1
	4 2369 70740	RT Pin	10
VOLUME CONTROL P.C.B. ASSY			
	4 1329 74850	Volume Control P.C.B. Assy	1
C126	CM5 6 3500 K00SV	Mylar 0.056MF 50V ±10%	1
C127	CC1 8 2500 KE00C	Ceramic 0.0018MF 50V ±10%	1
C128	CM4 7 3500 K00SV	Mylar 0.047MF 50V ±10%	1
C226	CM5 6 3500 K00SV	Mylar 0.056MF 50V ±10%	1
C227	CC1 8 2500 KE00C	Ceramic 0.0018MF 50V ±10%	1
C228	CM4 7 3500 K00SV	Mylar 0.047MF 50V ±10%	1
R127	RP4 7 2121 JH000	Pretty 4.7k ohm 1/8W ±5%	1
R128	RD3 3 2251 JN000	Carbon 3.3k ohm 1/4W ±5%	1
R227	RP4 7 2121 JH000	Pretty 4.7k ohm 1/8W ±5%	1
R228	RD3 3 2251 JN000	Carbon 3.3k ohm 1/4W ±5%	1
VR1	4 2229 71841	Volume Control (Volume, B-50k)	1
VR2	4 2229 71840	Volume Control (Tone, A-20k)	1
VR3	4 2229 71842	Volume Control (Balance, M-N20k)	1
SWITCH P.C.B. ASSY			
	4 1329 74860	Switch P.C.B. Assy	1
	141 2 4729 05000	Staple 5	1
	141 2 4729 04700	Staple 10	1
C313	CD1 0 7100 0001V	Electrolytic 100MF 10V	1
D109	205 5 9040 44210	Diode, DS442	1
D110	205 5 9040 44210	Diode, DS442	1
D209	205 5 9040 44210	Diode, DS442	1
D210	205 5 9040 44210	Diode, DS442	1
R114	RD1 8 2251 JS000	Carbon 1.8k ohm 1/4W ±5%	1
R214	RD1 8 2251 JS000	Carbon 1.8k ohm 1/4W ±5%	1
S2	4 2319 73700	Switch Lever (Function 1)	1
S3	4 2319 73690	Switch Lever (Mode)	1
S4	4 2319 72271	Switch Lever (Function 2)	1

Ref. No.	Part No.	Description	Q'ty
SOCKET P.C.B. ASSY			
	4 1329 74870	Socket P.C.B. Assy	1
C141	CD1 0 5100 0000V	Electrolytic 1MF 10V	1
C241	CD1 0 5100 0000V	Electrolytic 1MF 10V	1
C316	CM3 9 2500 K00SV	Mylar 0.0039MF 50V ±10%	1
C317	CM8 2 2500 K00SV	Mylar 0.0082MF 50V ±10%	1
R104	RD1 0 5251 JN000	Carbon 1.0M ohm 1/4W ±5%	1
R204	RD1 0 5251 JN000	Carbon 1.0M ohm 1/4W ±5%	1
J6	4 2359 71553	Din Socket 5P (Record/Playback)	1
S5	4 2319 72170	Slide Switch (Beat Cancel)	1
MOTOR ASSY			
	4 5279 70951	Motor Assy	1
	4 5279 70950	Motor	1
	4 2869 70410	Governor P.C.B. Assy	1
C801	CC2 2 3500 ZG00C	Ceramic 0.022MF 50V ±2%	1
C802	CD1 0 7160 0000V	Electrolytic 100MF 16V	1
D801	205 5 9060 44410	Diode, DS444	1
D802	205 5 9050 44310	Diode, DS443	1
D803	205 5 9040 44280	Diode, DS442	1
D804	205 5 9040 44280	Diode, DS442	1
TH801	204 5 9000 00200	Thermister, SDT20	1
L801	4 2539 70410	Choke Coil 500 µH	1
L802	4 2539 70451	Choke Coil 3.2 µH	1
L803	4 2539 70451	Choke Coil 3.2 µH	1
P801	4 2229 72980	Potentiometer (B-350k)	1
Q801	203 5 6750 54450	Transistor, 2SB544	1
Q802	203 5 5000 53660	Transistor, 2SC536	1
R801	RD1 5 2251 JV000	Carbon 1.5k ohm 1/4W ±5%	1
R802	RD1 0 1251 JV000	Carbon 100 ohm 1/4W ±5%	1
R803	RD1 3 1251 JV000	Carbon 130 ohm 1/4W ±5%	1
R804	RD5 6 1251 JV000	Carbon 560 ohm 1/4W ±5%	1
R805	RD1 2 2251 JV000	Carbon 1.2k ohm 1/4W ±5%	1
R806	RD6 8 1251 JV000	Carbon 680 ohm 1/4W ±5%	1
R807	RD1 2 0251 JV000	Carbon 12 ohm 1/4W ±5%	1
R808	RD1 0 0251 JV000	Carbon 10 ohm 1/4W ±5%	1
R809	RD1 5 2251 JV000	Carbon 1.5k ohm 1/4W ±5%	1
MECHANISM			
VR4	4 2229 71750	Volume Control (Mixing, A-20k)	1
J7	4 2359 74590	Jack P.C.B. Assy (Mixing)	1
S6	4 2319 71861	Leaf Switch (Power)	1
J8	4 2359 74010	Jack 1P (Headphone)	1
HD1	4 2429 71410	R/P Head	1
HD2	4 2429 70341	Erase Head	1
	4 5119 70461	Indicator	1
	141 0 3119 16900	Chassis Assy	1
	141 0 3159 00600	Eject Lever Bracket Assy	1
	141 0 3169 04200	Pause Bracket Assy	1
	141 0 5219 06100	Flywheel Assy	1
	141 0 5369 01000	Supply Reel Plate Complete	1
	141 0 5369 01100	Reel Plate Complete	1
	141 0 5419 02600	Rinch Roller Assy	1
	141 0 5519 06201	Take-up Idler Assy	1
	141 0 6219 01500	Band Switch Assy	1
	141 0 7319 18300	Pause Slide Plate Assy	1
	141 0 7319 18400	Slide Base Assy	1
	141 0 7419 20200	Lock Plate Assy	1
	141 0 7419 20300	Crank, Select Assy	1
	141 0 7419 22000	Lever, Record Assy	1
	141 0 7419 22100	Lever, Stop Assy	1
	141 0 7419 22200	Lever, Play Assy	1
	141 0 7419 22300	Lever, Rewind Assy	1
	141 0 7419 22400	Lever, F.F. Assy	1
	141 0 7439 05700	Lock Lever, Record Assy	1
	141 0 7439 05800	Arm, Take-up Pulley Assy	1
	141 0 7439 06000	Lever, Senser Assy	1
	141 0 7519 00101	Dial Shaft Assy	1
	141 2 1619 57800	Pause Button	1
	141 2 1629 04000	Switch Knob	4
	141 2 2419 22100	Switch Screen	4

PARTS LIST (Continued)

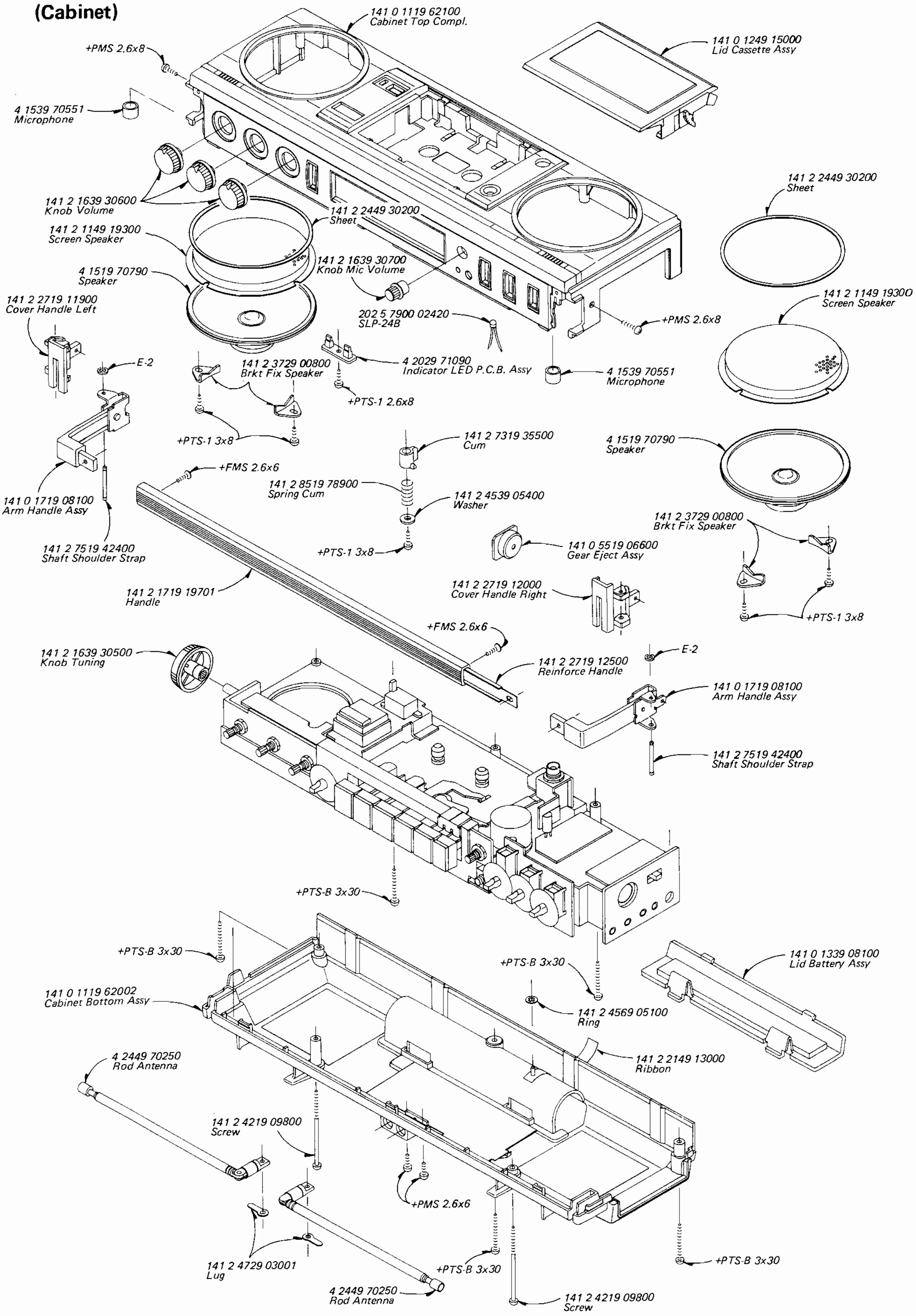
Ref. No.	Part No.	Description	Q'ty
MECHANISM			
	141 2 3119 11801	Radio Chassis	1
	141 2 3229 25900	Shield Plate, Volume	1
	141 2 3529 10100	Spacer, Pause Plate	1
	141 2 3679 27500	Headphone Bracket	1
	141 2 3739 05000	Meter Bracket	1
	141 2 3769 08000	Spacer, Head	1
	141 2 3829 06700	Terminal Battery, Anode	1
	141 2 3829 20800	Battery Spring	1
	141 2 4179 00700	Nut, Dial Shaft	1
	141 2 4179 01800	Nut	1
	141 2 4219 03000	Screw	4
	141 2 4219 09000	Screw	1
	141 2 4219 11400	Screw	2
	141 2 4219 14000	Screw	5
	141 2 4359 22200	Insulator	1
	141 2 4419 12000	Cushion	1
	141 2 4459 15900	Cushion, Motor	2
	141 2 4469 00500	Flywheel Thrust	1
	141 2 4469 20900	Cushion	1
	141 2 4469 28300	Cushion, Meter	1
	141 2 4469 29100	Cushion, Switch Screen	4
	141 2 4539 06900	Washer	1
	141 2 4539 08000	Washer	1
	141 2 4539 09300	Washer	1
	141 2 4539 09400	Washer	1
	141 2 4579 03200	Lug	1
	141 2 4619 00901	Tube, Brake	1
	141 2 4729 00200	Lug	1
	141 2 4729 04000	Lug	1
	141 2 4729 06000	Lug	1
	141 2 5119 04500	Pointer	1
	141 2 5389 02700	Drum	1
	141 2 5519 03300	Dial Roller A	4
	141 2 5519 23300	Gear F.F.	1
	141 2 5519 31500	Drive Idler	1
	141 2 5649 08500	Counter Belt	1
	141 2 5649 10800	Take-up Belt	1
	141 2 5649 13600	Driver Belt	1
	141 2 5719 07700	Spacer	1
	141 2 5719 07800	Spacer	2
	141 2 5719 09000	Spacer	2
	141 2 5729 14100	Capstan Metal	1
	141 2 7149 02700	Brake Plate	1
	141 2 7419 16500	Plate, Push Push Plate	1
	141 2 7419 52300	Lever, Shut-off	1
	141 2 7419 55800	Eject Plate	1
	141 2 7419 57900	Pause Lever	1
	141 2 7419 58000	Select Lever	1
	141 2 7439 14200	Review Lever	1
	141 2 8119 04900	Counter	1
	141 2 8219 17800	Spacer, Pinch Roller	1
	141 2 8219 25800	String Bracket	1
	141 2 8259 04700	Dial Roller	1
	141 2 8259 05900	Dial Roller	1
	141 2 8419 09600	Record Actuating Lever	1
	141 2 8459 02900	Flywheel Support	1
	141 2 8519 05400	Spring, Record Actuator	1
	141 2 8519 06700	Spring, Cassette Case Lever B	1
	141 2 8519 12200	Spring, Motor Lock	1
	141 2 8519 33000	Spring, Index Lock Lever	1
	141 2 8519 35400	Spring, Record Lock Lever	1
	141 2 8519 47400	Spring, Head	1
	141 2 8519 49800	Spring, F.F. Lever	1
	141 2 8519 50701	Spring, Play Lever	1
	141 2 8519 57300	Spring, Stop Lever	1
	141 2 8519 63600	Spring, Brake	2
	141 2 8519 69100	Spring, Shut-off	1
	141 2 8519 70300	Spring, Pause Plate	1
	141 2 8519 71500	Spring, Slide Base	1
	141 2 8519 74700	Spring, Brake	1

Ref. No.	Part No.	Description	Q'ty
MECHANISM			
	141 2 8519 75700	Spring, Pinch Roller	1
	141 2 8519 77000	Spring, Lock Plate	1
	141 2 8519 77300	Spring, Actuating Record	1
	141 2 8519 77500	Spring, Pause Latch	1
	141 2 8539 32800	Spring, Cassette	1
R134	RD1 5 1251 JM000	Carbon 150 ohm 1/4W ±5%	1
R234	RD1 5 1251 JM000	Carbon 150 ohm 1/4W ±5%	1
	101 3 1302 00311	Screw, Pan Hd. +M2.0x3	7
	101 3 1302 00411	Screw, Pan Hd. +M2.0x4	5
	101 3 1302 00611	Screw, Pan Hd. +M2.0x6	1
	101 3 1302 60411	Screw, Pan Hd. +M2.6x4	1
	101 3 1302 60611	Screw, Pan Hd. +M2.6x6	2
	101 3 1302 60811	Screw, Pan Hd. +M2.6x8	2
	101 3 2502 00811	Screw, Cylinder Hd. -M2.0x8	1
	102 3 1302 60811	Screw, Pan Hd. Tapping-1 +M2.6x8	9
	102 3 1302 61011	Screw, Pan Hd. Tapping-1 +M2.6x10	4
	110 3 1102 00023	Small Round Washer M2.0	1
	110 3 1202 60023	Finished Washer M2.6	1
	112 3 1301 50082	E Ring M1.5	13
	112 3 1302 00082	E Ring M2.0	6
	131 3 1302 60511	Screw, Pan Hd. C SW M2.6x5	1
	143 3 1303 03018	Screw, Pan Hd. Tapping-B +M3.0x30	2

NOTES:
1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

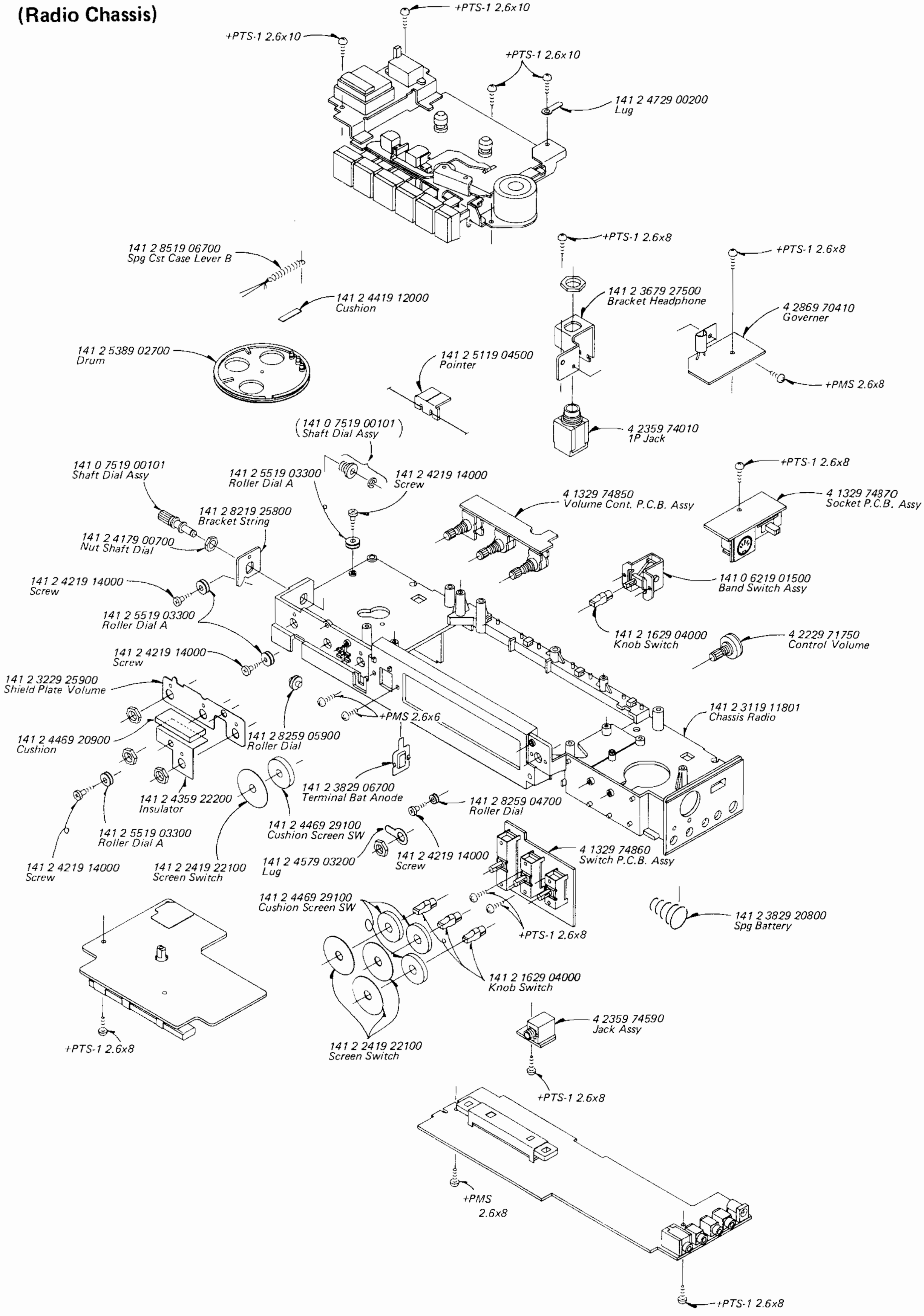
EXPLODED VIEW

(Cabinet)


141 0 1119 62100
Cabinet Top Compl.
+PMS 2.6x8
141 0 1249 15000
Lid Cassette Assy
4 1539 70551
Microphone
141 2 1639 30600
Knob Volume
141 2 2449 30200
Sheet
141 2 2449 30200
Sheet
141 2 1149 19300
Screen Speaker
141 2 1639 30700
Knob Mic Volume
4 1519 70790
Speaker
141 2 1149 19300
Screen Speaker
141 2 2719 11900
Cover Handle Left
202 5 7900 02420
SLP-24B
+PMS 2.6x8
E-2
141 2 3729 00800
Brkt Fix Speaker
4 2029 71090
Indicator LED P.C.B. Assy
4 1539 70551
Microphone
+PTS-1 2.6x8
+PTS-1 3x8
141 2 7319 35500
Cum
4 1519 70790
Speaker
+FMS 2.6x6
141 2 8519 78900
Spring Cum
141 0 1719 08100
Arm Handle Assy
141 2 4539 05400
Washer
141 2 3729 00800
Brkt Fix Speaker
141 2 7519 42400
Shaft Shoulder Strap
+PTS-1 3x8
141 0 5519 06600
Gear Eject Assy
141 2 1719 19701
Handle
141 2 2719 12000
Cover Handle Right
+PTS-1 3x8
+FMS 2.6x6
141 2 1639 30500
Knob Tuning
141 2 2719 12500
Reinforce Handle
E-2
141 0 1719 08100
Arm Handle Assy
141 2 7519 42400
Shaft Shoulder Strap
+PTS-B 3x30
+PTS-B 3x30
+PTS-B 3x30
141 0 1339 08100
Lid Battery Assy
141 0 1119 62002
Cabinet Bottom Assy
141 2 4569 05100
Ring
4 2449 70250
Rod Antenna
141 2 2149 13000
Ribbon
141 2 4219 09800
Screw
+PMS 2.6x6
141 2 4729 03001
Lug
+PTS-B 3x30
+PTS-B 3x30
4 2449 70250
Rod Antenna
141 2 4219 09800
Screw

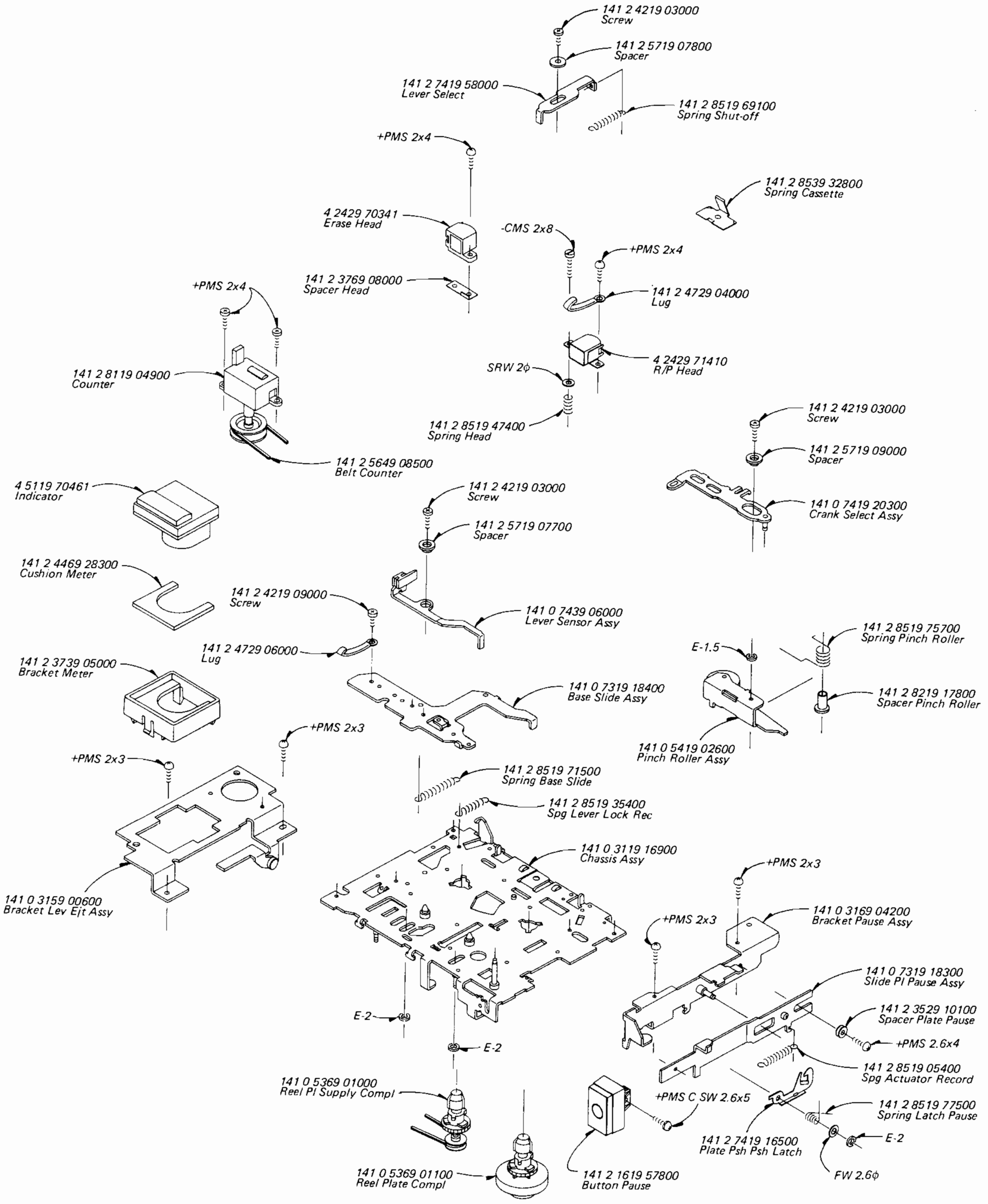
EXPLODED VIEW (Continued)

(Radio Chassis)


+PTS-1 2.6x10
+PTS-1 2.6x10
+PTS-1 2.6x10
141 2 4729 00200 Lug
141 2 8519 06700 Spg Cst Case Lever B
+PTS-1 2.6x8
+PTS-1 2.6x8
141 2 4419 12000 Cushion
141 2 3679 27500 Bracket Headphone
4 2869 70410 Governer
141 2 5389 02700 Drum
141 2 5119 04500 Pointer
+PMS 2.6x8
(141 0 7519 00101 Shaft Dial Assy)
4 2359 74010 1P Jack
141 0 7519 00101 Shaft Dial Assy
141 2 5519 03300 Roller Dial A
141 2 4219 14000 Screw
+PTS-1 2.6x8
4 1329 74850 Volume Cont. P.C.B. Assy
4 1329 74870 Socket P.C.B. Assy
141 2 8219 25800 Bracket String
141 2 4179 00700 Nut Shaft Dial
141 2 4219 14000 Screw
141 0 6219 01500 Band Switch Assy
141 2 5519 03300 Roller Dial A
141 2 1629 04000 Knob Switch
4 2229 71750 Control Volume
141 2 4219 14000 Screw
141 2 3229 25900 Shield Plate Volume
141 2 3119 11801 Chassis Radio
+PMS 2.6x6
141 2 4469 20900 Cushion
141 2 8259 05900 Roller Dial
141 2 3829 06700 Terminal Bat Anode
141 2 4359 22200 Insulator
141 2 8259 04700 Roller Dial
141 2 4469 29100 Cushion Screen SW
141 2 5519 03300 Roller Dial A
141 2 4219 14000 Screw
141 2 2419 22100 Screen Switch
141 2 4579 03200 Lug
141 2 4219 14000 Screw
4 1329 74860 Switch P.C.B. Assy
141 2 4469 29100 Cushion Screen SW
141 2 3829 20800 Spg Battery
+PTS-1 2.6x8
141 2 1629 04000 Knob Switch
4 2359 74590 Jack Assy
+PTS-1 2.6x8
141 2 2419 22100 Screen Switch
+PTS-1 2.6x8
+PMS 2.6x8
+PTS-1 2.6x8

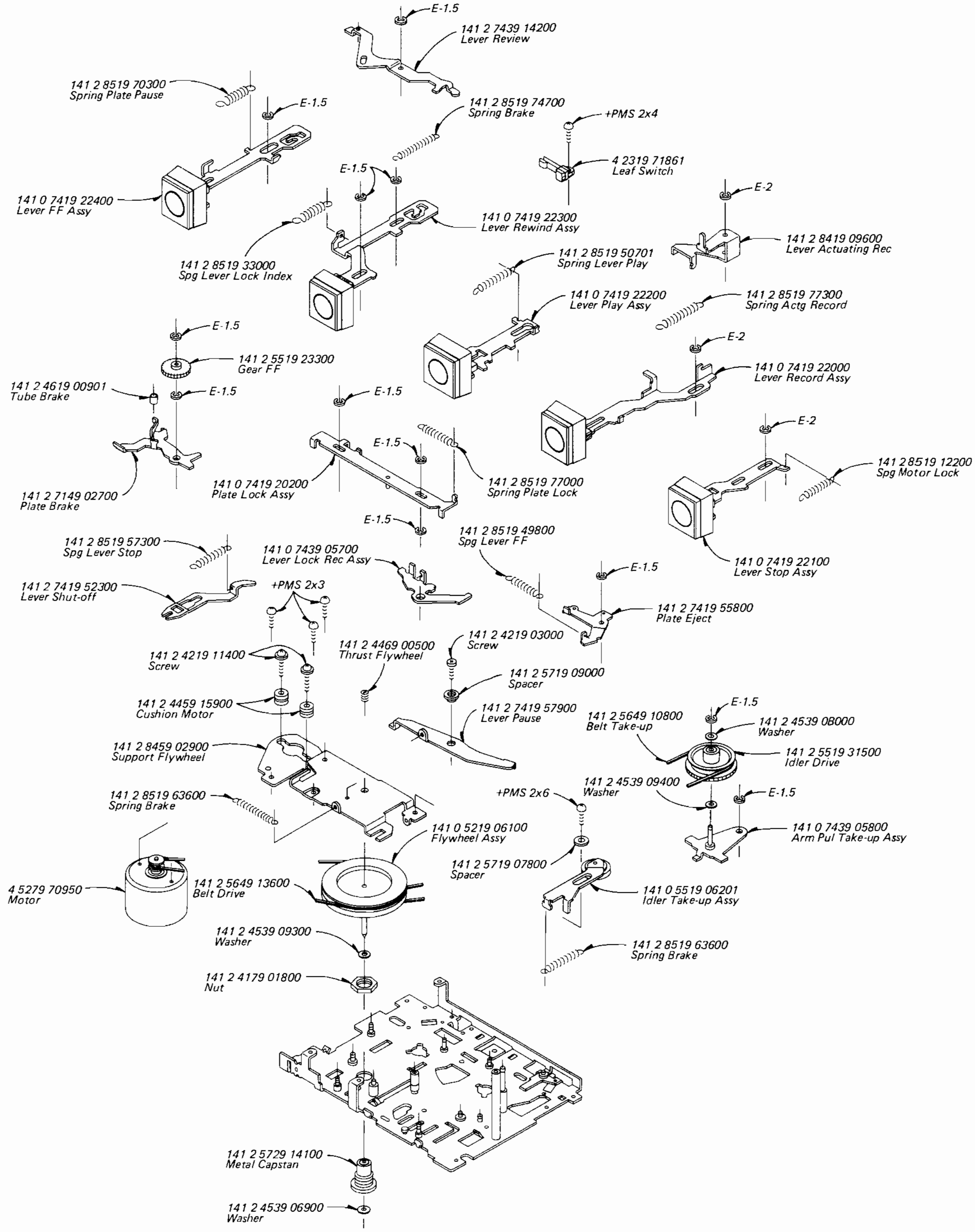
EXPLODED VIEW (Continued)

(Chassis Top)

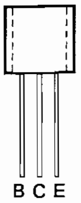
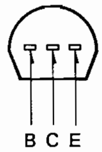
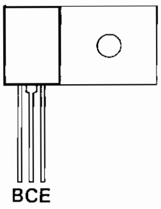
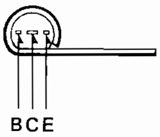

141 2 4219 03000
Screw
141 2 5719 07800
Spacer
141 2 7419 58000
Lever Select
141 2 8519 69100
Spring Shut-off
+PMS 2x4
141 2 8539 32800
Spring Cassette
4 2429 70341
Erase Head
-CMS 2x8
+PMS 2x4
141 2 3769 08000
Spacer Head
+PMS 2x4
141 2 4729 04000
Lug
141 2 8119 04900
Counter
SRW 2ϕ
4 2429 71410
R/P Head
141 2 4219 03000
Screw
141 2 8519 47400
Spring Head
141 2 5719 09000
Spacer
141 2 5649 08500
Belt Counter
4 5119 70461
Indicator
141 2 4219 03000
Screw
141 0 7419 20300
Crank Select Assy
141 2 5719 07700
Spacer
141 2 4469 28300
Cushion Meter
141 2 4219 09000
Screw
141 0 7439 06000
Lever Sensor Assy
141 2 8519 75700
Spring Pinch Roller
E-1.5
141 2 4729 06000
Lug
141 2 3739 05000
Bracket Meter
141 0 7319 18400
Base Slide Assy
141 2 8219 17800
Spacer Pinch Roller
+PMS 2x3
141 0 5419 02600
Pinch Roller Assy
+PMS 2x3
141 2 8519 71500
Spring Base Slide
141 2 8519 35400
Spg Lever Lock Rec
141 0 3119 16900
Chassis Assy
+PMS 2x3
141 0 3159 00600
Bracket Lev Ejt Assy
+PMS 2x3
141 0 3169 04200
Bracket Pause Assy
141 0 7319 18300
Slide Pl Pause Assy
141 2 3529 10100
Spacer Plate Pause
E-2
+PMS 2.6x4
E-2
141 2 8519 05400
Spg Actuator Record
141 0 5369 01000
Reel Pl Supply Compl
+PMS C SW 2.6x5
141 2 8519 77500
Spring Latch Pause
141 2 7419 16500
Plate Psh Psh Latch
E-2
141 0 5369 01100
Reel Plate Compl
141 2 1619 57800
Button Pause
FW 2.6ϕ

EXPLODED VIEW (Continued)

(Chassis Bottom)

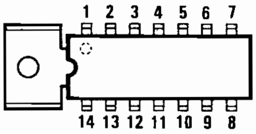

E-1.5
141 2 7439 14200
Lever Review
141 2 8519 70300
Spring Plate Pause
E-1.5
141 2 8519 74700
Spring Brake
+PMS 2x4
4 2319 71861
Leaf Switch
E-1.5
141 0 7419 22400
Lever FF Assy
E-2
141 0 7419 22300
Lever Rewind Assy
141 2 8419 09600
Lever Actuating Rec
141 2 8519 33000
Spg Lever Lock Index
141 2 8519 50701
Spring Lever Play
141 0 7419 22200
Lever Play Assy
141 2 8519 77300
Spring Actg Record
E-1.5
E-2
141 2 5519 23300
Gear FF
141 0 7419 22000
Lever Record Assy
141 2 4619 00901
Tube Brake
E-1.5
E-1.5
E-2
E-1.5
141 2 8519 12200
Spg Motor Lock
141 2 7149 02700
Plate Brake
141 0 7419 20200
Plate Lock Assy
141 2 8519 77000
Spring Plate Lock
E-1.5
141 2 8519 49800
Spg Lever FF
141 2 8519 57300
Spg Lever Stop
141 0 7439 05700
Lever Lock Rec Assy
141 0 7419 22100
Lever Stop Assy
E-1.5
141 2 7419 52300
Lever Shut-off
+PMS 2x3
141 2 7419 55800
Plate Eject
141 2 4219 03000
Screw
141 2 4469 00500
Thrust Flywheel
141 2 4219 11400
Screw
141 2 5719 09000
Spacer
E-1.5
141 2 4459 15900
Cushion Motor
141 2 7419 57900
Lever Pause
141 2 5649 10800
Belt Take-up
141 2 4539 08000
Washer
141 2 8459 02900
Support Flywheel
141 2 5519 31500
Idler Drive
141 2 4539 09400
Washer
141 2 8519 63600
Spring Brake
+PMS 2x6
E-1.5
141 0 5219 06100
Flywheel Assy
141 0 7439 05800
Arm Pul Take-up Assy
141 2 5719 07800
Spacer
4 5279 70950
Motor
141 2 5649 13600
Belt Drive
141 0 5519 06201
Idler Take-up Assy
141 2 4539 09300
Washer
141 2 8519 63600
Spring Brake
141 2 4179 01800
Nut
141 2 5729 14100
Metal Capstan
141 2 4539 06900
Washer

IC & TRANSISTOR LEAD IDENTIFICATION

FRONT VIEW	BOTTOM VIEW	TRANSISTOR
		2SC536 2SC693 2SC1815 2SD545
		2SB544
TERMINAL NAMES		
B⇒ BASE C⇒ COLLECTOR E⇒ EMITTER		

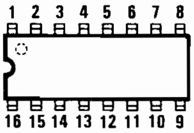
LA4135

(Bottom View)


1 2 3 4 5 6 7
14 13 12 11 10 9 8

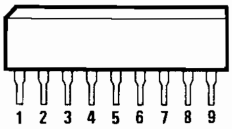
µPC1018, AN7410

(Bottom View)

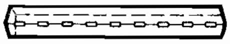

1 2 3 4 5 6 7 8
16 15 14 13 12 11 10 9

TA7135P

(Side View)

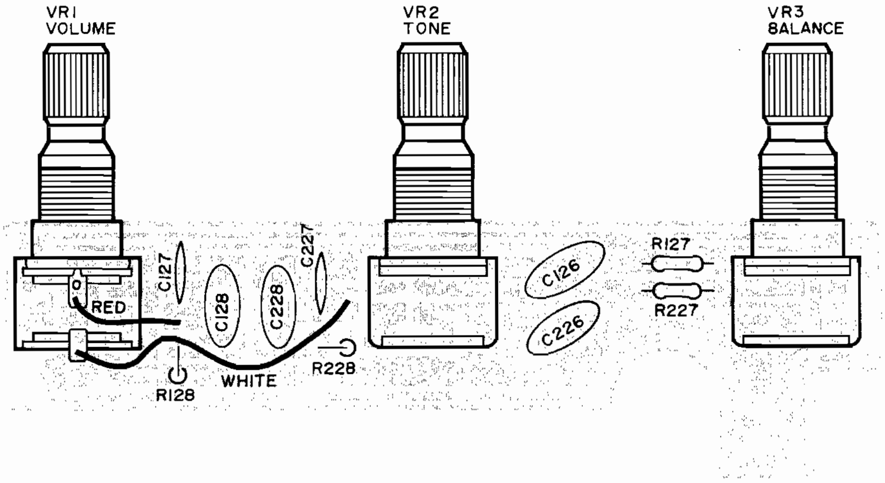


(Bottom View)

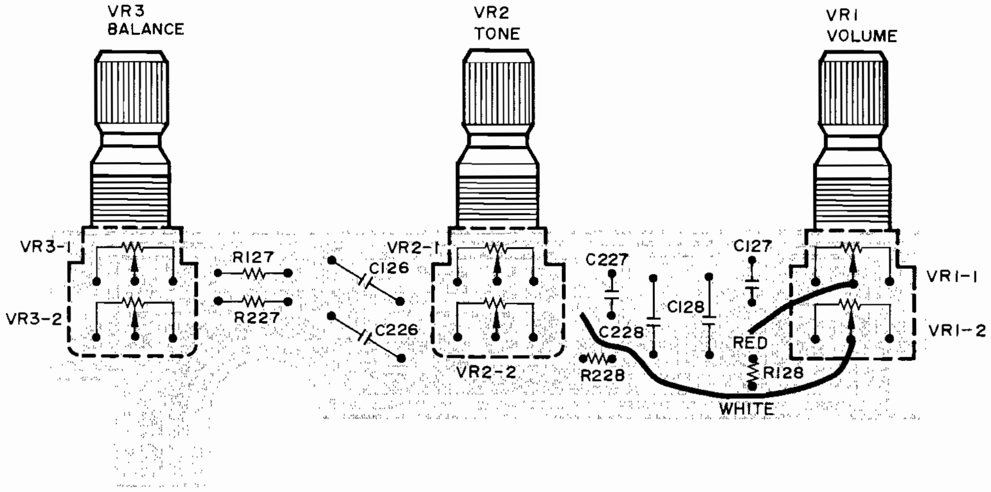


VOLUME CONTROL P.C.BOARD

(Top View)

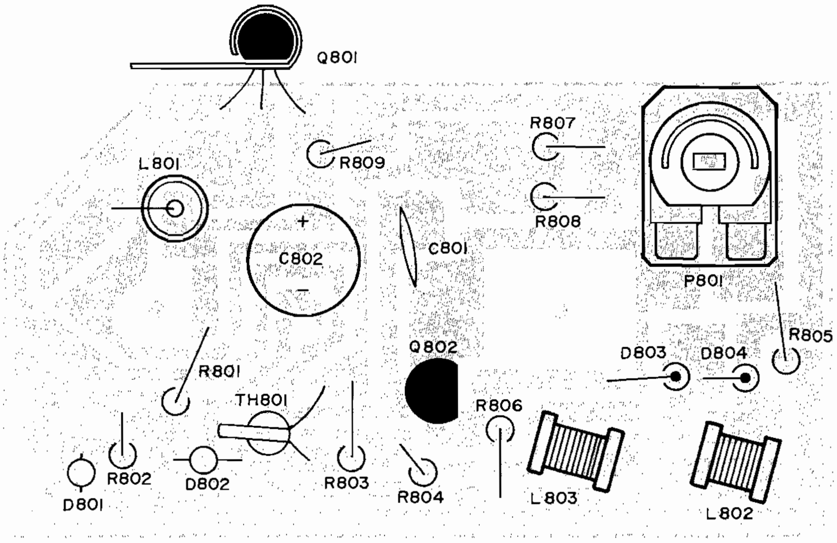

VR1
VOLUME
VR2
TONE
VR3
BALANCE
C127
C227
C128
C228
RED
WHITE
R128
R228
C126
C226
R127
R227

(Bottom View)

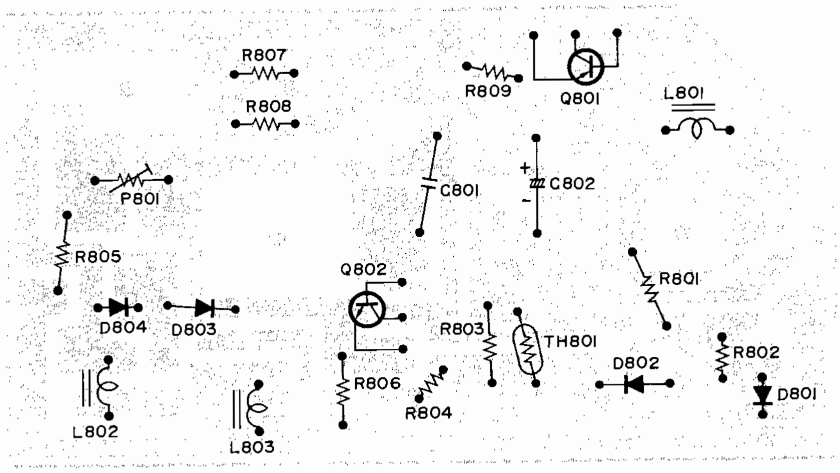

VR3
BALANCE
VR2
TONE
VR1
VOLUME
VR3-1
VR3-2
R127
R227
VR2-1
C126
C226
VR2-2
C227
C228
C128
R228
C127
RED
R128
WHITE
VR1-1
VR1-2

GOVERNOR P.C.BOARD

(Top View)

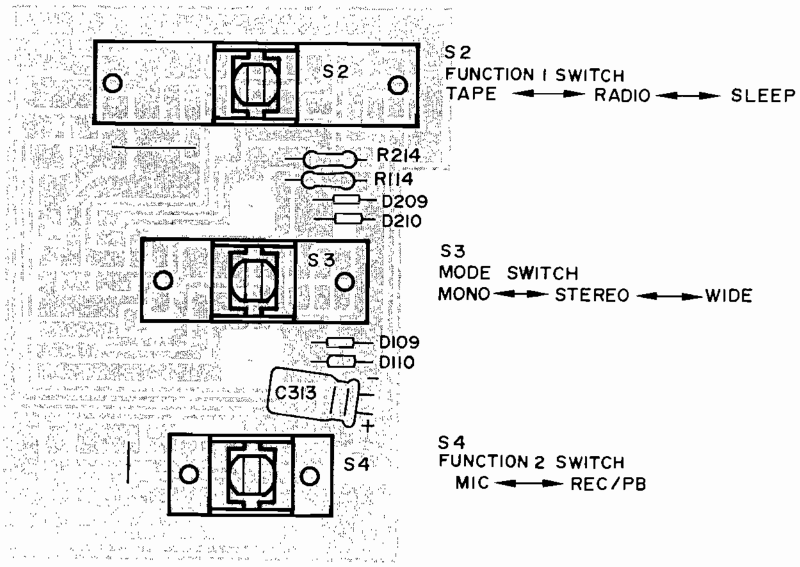

Q801
R807
L801
R809
R808
C802
C801
P801
R805
Q802
D803
D804
R801
TH801
R806
R802
D802
R803
R804
L803
L802
D801

(Bottom View)

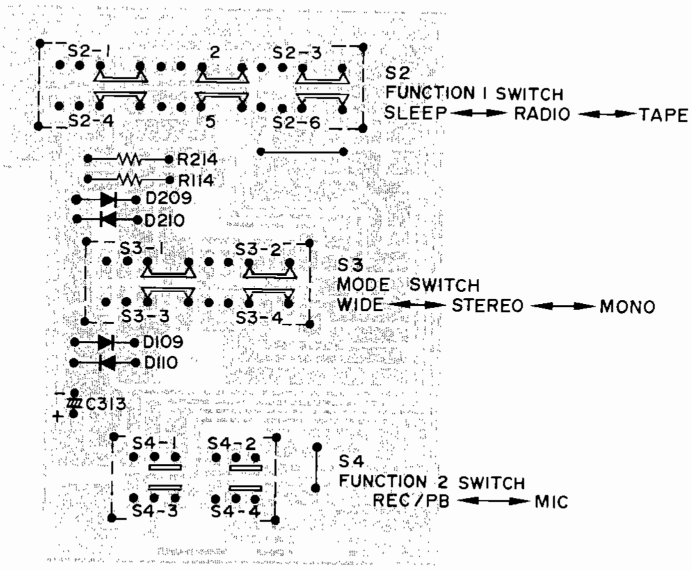

R807
R808
R809
Q801
L801
P801
C801
C802
R805
Q802
R801
D804
D803
R803
TH801
R802
D802
R806
D801
R804
L802
L803

SWITCH P.C.BOARD

(Top View)

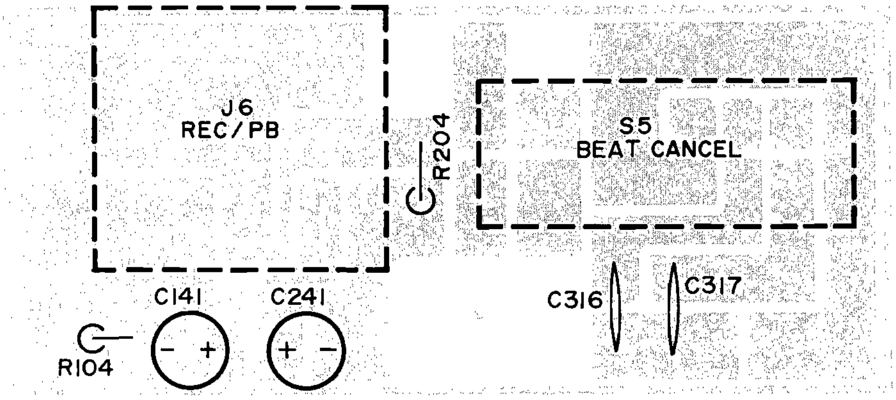

S2
FUNCTION 1 SWITCH
TAPE ◄──► RADIO ◄──► SLEEP
R214
R114
D209
D210
S3
MODE SWITCH
MONO ◄──► STEREO ◄──► WIDE
D109
D110
C313
+
S4
FUNCTION 2 SWITCH
MIC ◄──► REC/PB

(Bottom View)

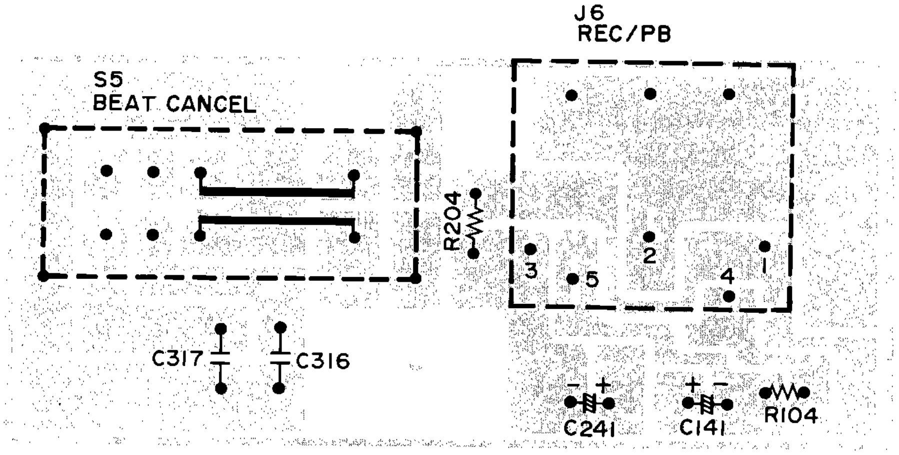

S2-1
2
S2-3
S2-4
5
S2-6
S2
FUNCTION 1 SWITCH
SLEEP ◄──► RADIO ◄──► TAPE
R214
R114
D209
D210
S3-1
S3-2
S3-3
S3-4
S3
MODE SWITCH
WIDE ◄──► STEREO ◄──► MONO
D109
D110
C313
+
S4-1
S4-2
S4-3
S4-4
S4
FUNCTION 2 SWITCH
REC/PB ◄──► MIC

SCOKET P.C.BOARD

(Top View)

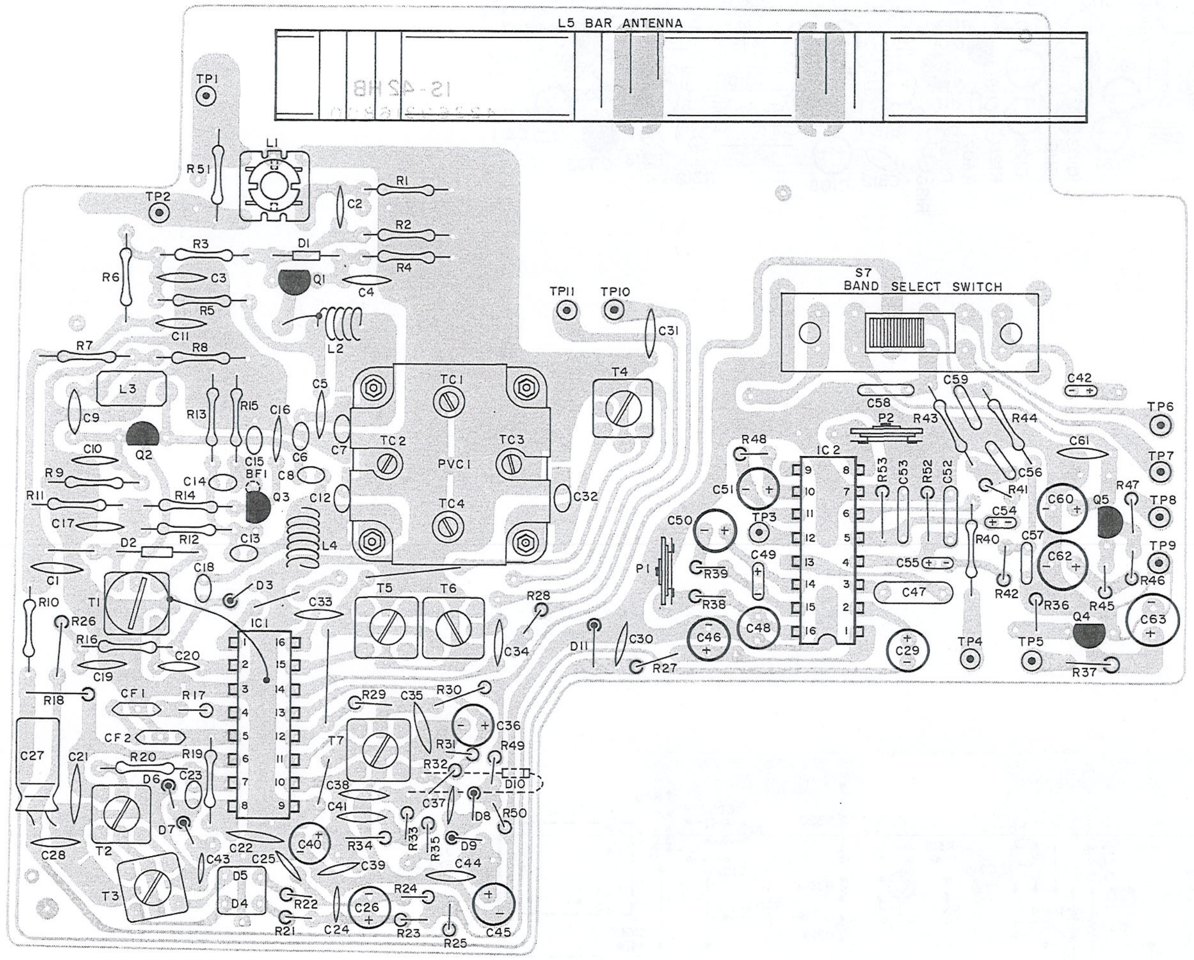

J6
REC/PB
R204
S5
BEAT CANCEL
C141
C241
C316
C317
R104

(Bottom View)


J6
REC/PB
S5
BEAT CANCEL
R204
3
5
2
4
1
C317
C316
C241
C141
R104

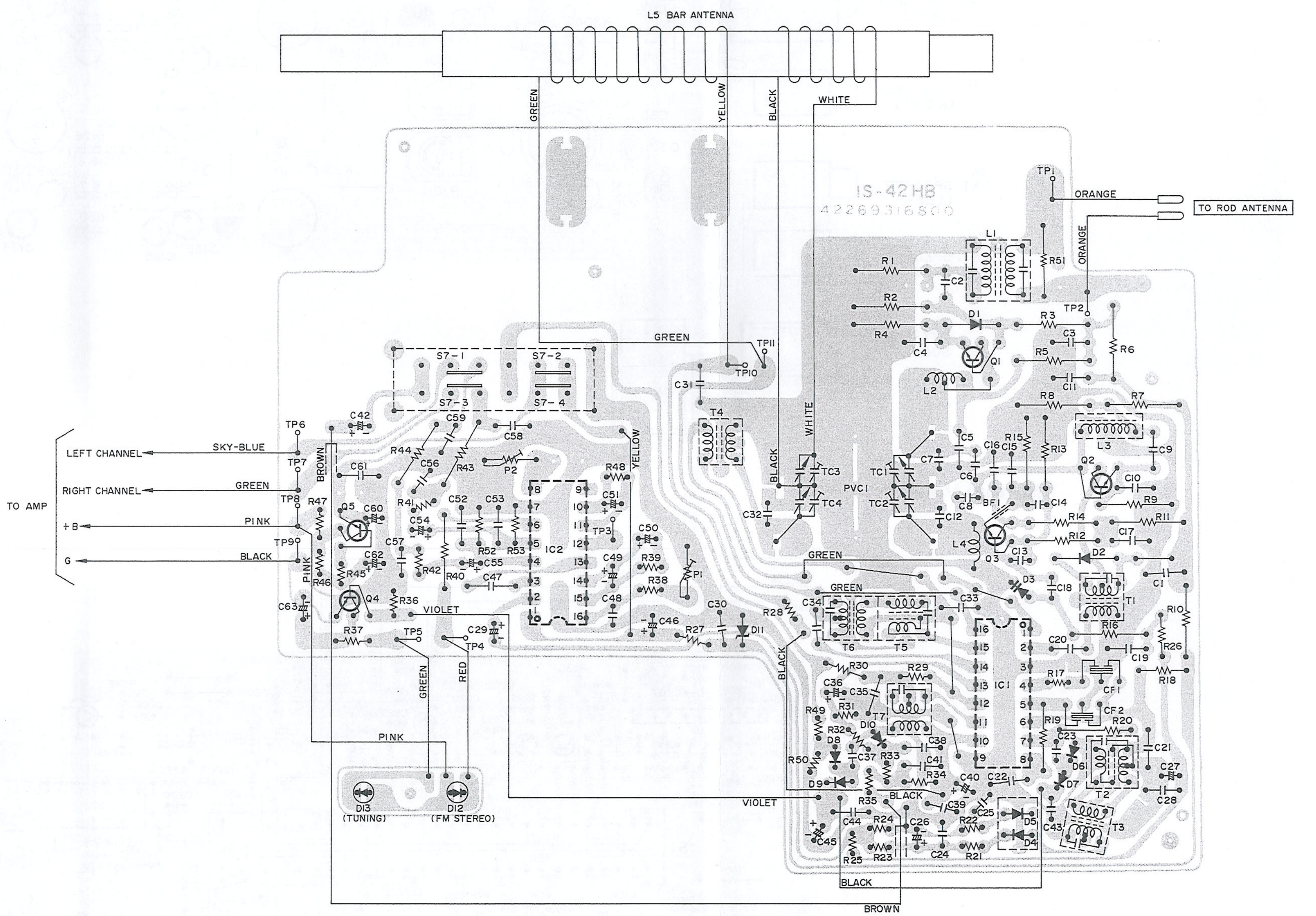
RADIO TUNER P.C.BOARD

(Top View)



L5 BAR ANTENNA
IS-42HB
TP1
L1
R51
TP2
C2
R1
R2
R3
D1
R4
R6
C3
Q1
C4
R5
C11
L2
R7
R8
TP11
TP10
C31
S7
BAND SELECT SWITCH
T4
L3
R13
R15
C16
C5
TC1
TC2
TC3
PVC1
TC4
C9
C10
Q2
C14
C15
BF1
C6
C7
C8
Q3
C12
C32
R9
R14
R11
C17
D2
R12
C13
L4
C1
R18
D3
C33
T1
R10
R26
R16
C19
C20
IC1
T5
T6
R28
C34
CF1
R17
CF2
R20
R19
C27
C21
D6
C23
D7
T2
C28
T3
C43
C22
C25
D5
D4
C40
R34
C39
C38
C41
C37
R33
R35
D9
C44
R22
R21
C24
C26
R23
R24
R25
C45
R29
C35
R30
C36
T7
R31
R49
R32
D10
D8
R50
C59
C58
P2
R43
R44
C42
R48
IC2
R53
C53
R52
C52
C56
R41
C54
C55
C57
R40
C47
R42
C51
C50
TP3
C49
C60
C62
Q5
R47
TP6
TP7
TP8
TP9
R46
C61
P1
R39
R38
C46
C48
D11
C30
R27
C29
TP4
TP5
R36
R45
Q4
C63
R37

(Bottom View)

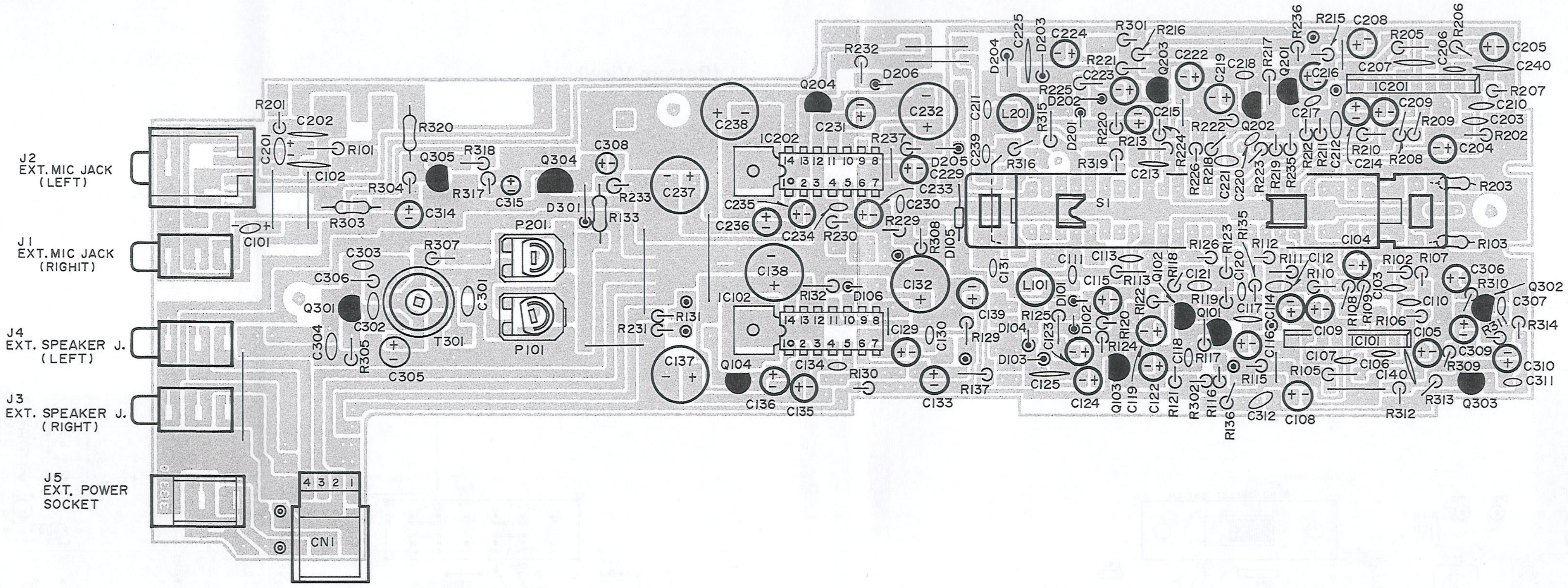


L5 BAR ANTENNA
GREEN
YELLOW
BLACK
WHITE
TP1
ORANGE
TO ROD ANTENNA
IS-42HB
422693168
LEFT CHANNEL
SKY-BLUE
RIGHT CHANNEL
GREEN
TO AMP
+B
PINK
G
BLACK
TP6
TP7
TP8
TP9
BROWN
PINK
S7-1
S7-2
S7-3
S7-4
GREEN
TP11
TP10
C31
T4
TC3
TC4
TC1
TC2
PVC1
C32
IC2
IC1
VIOLET
GREEN
RED
PINK
D13
(TUNING)
D12
(FM STEREO)
VIOLET
BLACK
BROWN
T5
T6
T7
T1
T2
T3
L1
L2
L3
L4
Q1
Q2
Q3
Q4
Q5
P1
P2
CF1
CF2

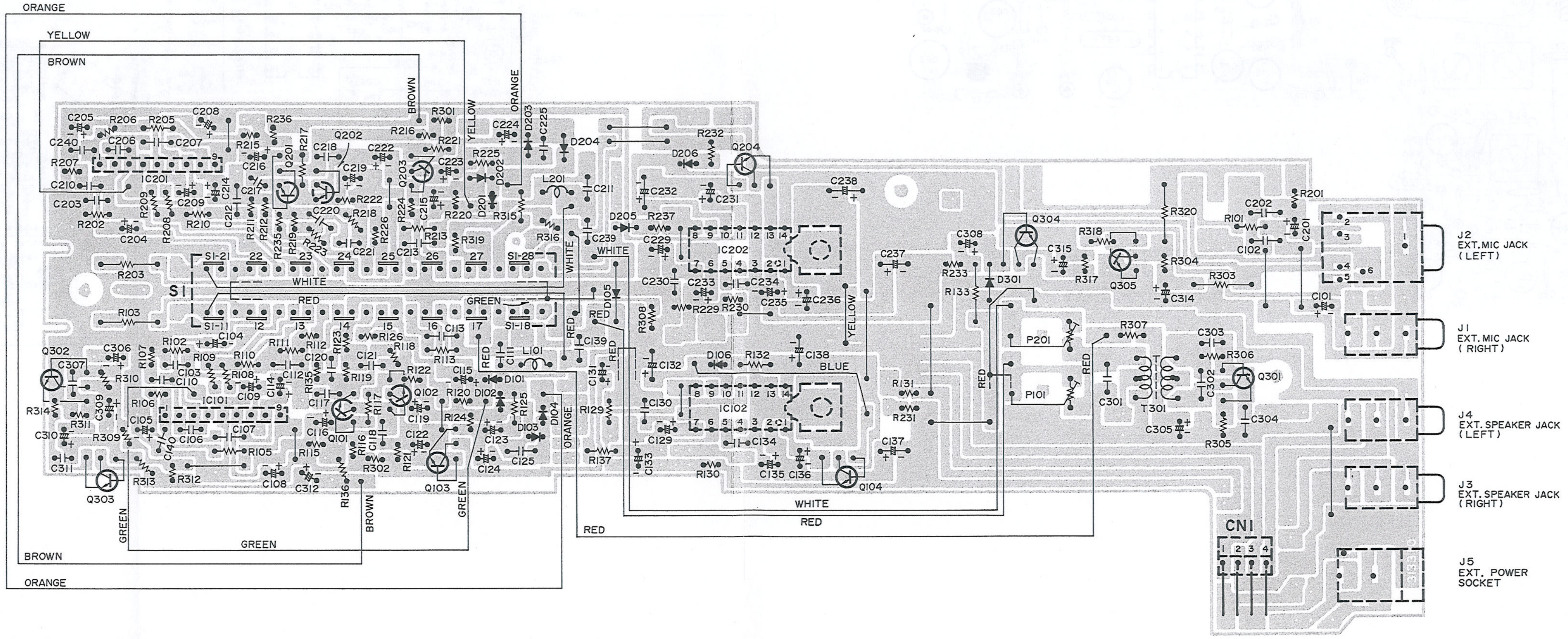
This circuit is subject to change without notice for performance improvement.

AMPLIFIER BASE P.C.BOARD

(Top View)

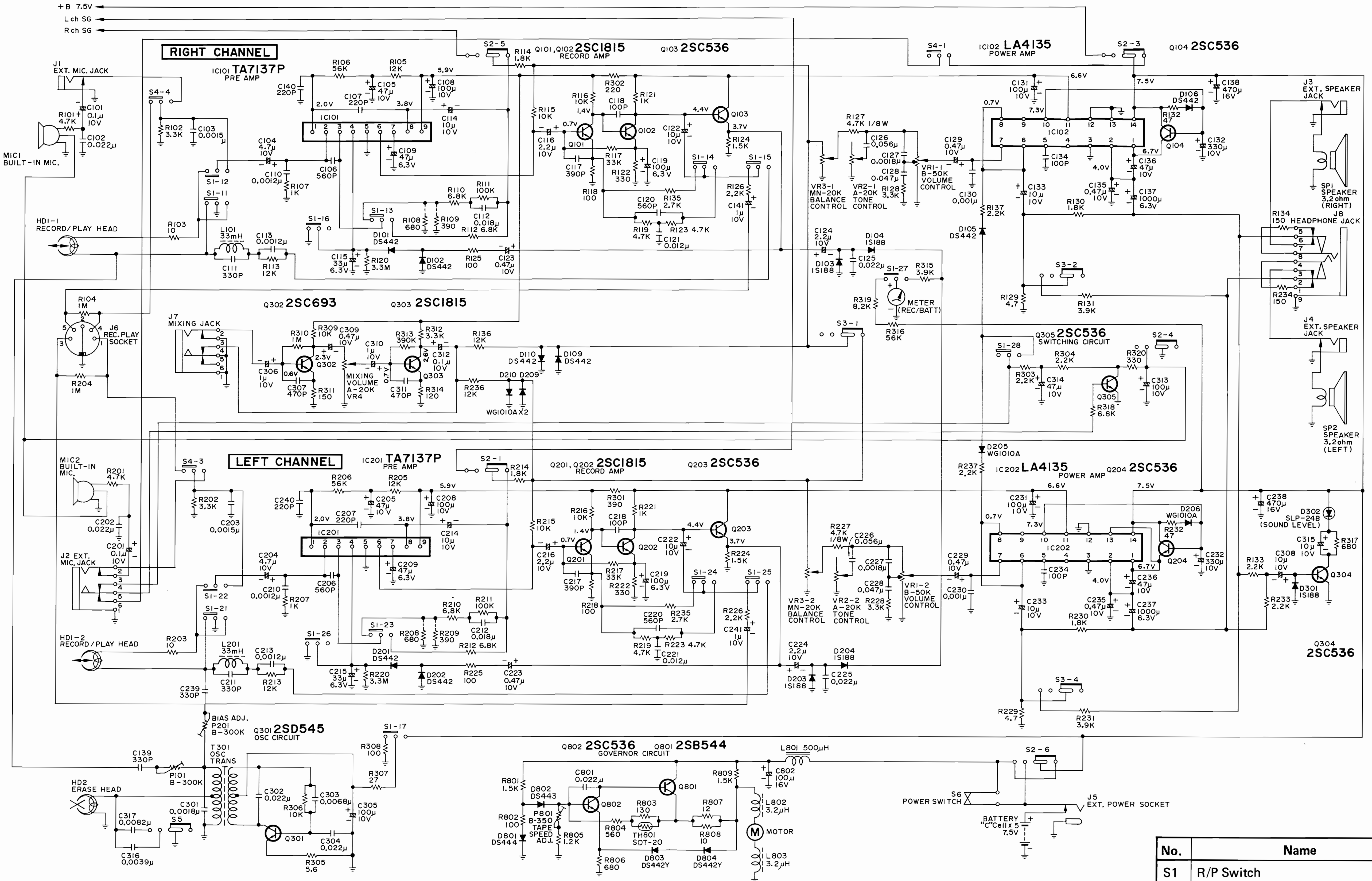

J2
EXT. MIC JACK
(LEFT)
J1
EXT. MIC JACK
(RIGHT)
J4
EXT. SPEAKER J.
(LEFT)
J3
EXT. SPEAKER J.
(RIGHT)
J5
EXT. POWER
SOCKET
CN1
4 3 2 1
S1
IC201
IC202
IC101
IC102
P201
P101
T301
L201
L101

(Bottom View)


ORANGE
YELLOW
BROWN
WHITE
RED
GREEN
BLUE
S1
IC201
IC202
IC101
IC102
P201
P101
T301
CN1
1 2 3 4
J2
EXT. MIC JACK
(LEFT)
J1
EXT. MIC JACK
(RIGHT)
J4
EXT. SPEAKER JACK
(LEFT)
J3
EXT. SPEAKER JACK
(RIGHT)
J5
EXT. POWER
SOCKET

This circuit is subject to change without notice for performance improvement.

SCHEMATIC DIAGRAM (Amplifier)


+B 7.5V
Lch SG
Rch SG
RIGHT CHANNEL
IC101 TA7137P PRE AMP
Q101, Q102 2SC1815 RECORD AMP
Q103 2SC536
IC102 LA4135 POWER AMP
Q104 2SC536
J1 EXT. MIC. JACK
MIC1 BUILT-IN MIC.
HD1-1 RECORD/PLAY HEAD
J6 REC. PLAY SOCKET
J7 MIXING JACK
Q302 2SC693
Q303 2SC1815
MIXING VOLUME A-20K VR4
WG1010AX2
VR3-1 MN-20K BALANCE CONTROL
VR2-1 A-20K TONE CONTROL
VR1-1 B-50K VOLUME CONTROL
METER (REC/BATT)
Q305 2SC536 SWITCHING CIRCUIT
J3 EXT. SPEAKER JACK
SP1 SPEAKER 3.2ohm (RIGHT)
J8 HEADPHONE JACK
J4 EXT. SPEAKER JACK
SP2 SPEAKER 3.2ohm (LEFT)
LEFT CHANNEL
IC201 TA7137P PRE AMP
Q201, Q202 2SC1815 RECORD AMP
Q203 2SC536
IC202 LA4135 POWER AMP
Q204 2SC536
MIC2 BUILT-IN MIC.
J2 EXT. MIC. JACK
HD1-2 RECORD/PLAY HEAD
VR3-2 MN-20K BALANCE CONTROL
VR2-2 A-20K TONE CONTROL
VR1-2 B-50K VOLUME CONTROL
D302 SLP-24B (SOUND LEVEL)
Q304 2SC536
BIAS ADJ. P201 B-300K
Q301 2SD545 OSC CIRCUIT
T301 OSC TRANS
HD2 ERASE HEAD
P101 B-300K
S5
Q802 2SC536
Q801 2SB544 GOVERNOR CIRCUIT
P801 B-350 TAPE SPEED ADJ.
TH801 SDT-20
MOTOR
L801 500μH
L802 3.2μH
L803 3.2μH
S6 POWER SWITCH
J5 EXT. POWER SOCKET
BATTERY "C"Cell x 5 7.5V

No.	Name	Position
S1	R/P Switch	PLAYBACK
S2	FUNCTION Switch 1	TAPE
S3	MODE Switch	MONO
S4	FUNCTION Switch 2	MIC
S5	BEAT CANCEL Switch	1
S6	POWER Switch	OFF
S7	BAND SELECT Switch	FM

NOTE:

The described voltages show the values measured by the tester (Internal Resistance: 20k-ohm/V) at no signal with the unit in the playback mode.

This circuit is subject to change without notice for performance improvement.

SANYO ELECTRIC TRADING CO., LTD
OSAKA, JAPAN
August/'79/1,200 **Printed in Japan**

MODIFICATION NOTICE

CASSETTE RECORDER

SANYO

M 1950 Series
M 7700 Series
M 7800 Series
M 9922 Series
M 9923 Series
M 9924 Series

Date Sep, 30, 1983 Issued by

The following corrections should be made in the SERVICE MANUALS and PARTS (PRICE) LIST.

Modification Notices WM-10554 (issued on July, 25, 1983), and WM-10667 (issued on September, 9, 1983) have now been superseded by this sheet WM-10830.
Be sure to destroy the hitherto WM-10554 and WM-10667 to avoid any possible confusion arising in future.

We can no longer be enable to supply you with IC LA4135 used in amplifier PCB because its production is discontinued.

1. Use the IC LA4138 as a substitute for IC LA4135 being used in the following models:
   (Incidentally, a change in the circuit is not required for this substitution.)

M-1950F (General), M-1950FG (UK), M-1950FE (Europe), M-1950H (General), M-1950F (General)
M-7700 (USA), M-7700 (Canada), M-7700F (Europe), M-7700F (Australia), M-7700FB (South Africa),
M-7700F (General), M-7700FW (General), M-7700K (General), M-7700LE (Europe), M-7700LG (UK)
M-7800 (USA), M-7800K (Australia), M-7800KB (South Africa), M-7800F (General), M-7800K (General),
M-7800MK (General), M-7800LE (Europe), M-7800LG (UK)

M-9922 (USA), M-9922K (Australia), M-9922K (South Africa), M-9922K (General), M-9922RK (General),
M-9922RK (South Africa), M-9922LU (Europe), M-9922LG (UK)
M-9923 (USA), M9923 (Canada), M-9923LU (Europe), M-9923 (UK)
M-9924 (USA), M-9924 (Canada), M-9924K (Australia), M-9924K (General), M-9924LU (Europe)

INTERCHANGEABLE NOT INTERCHANGEABLE	Serial No. Chassis No.	Effective from
Q'ty of initial production before modification.	Identification of modified unit.	

REASON FOR MODIFICATION

A ..... Standardization	C ..... Improvement of reliability	E ..... Miss print	G .....
B ..... Change of materials	D ..... Improvement of performance	F ..... Miss register	

Printed in Japan 14000

SANYO ELECTRIC TRADING CO., LTD.
OSAKA, JAPAN

WM-10830

MODIFICATION NOTICE

SANYO

RADIO CASSETTE RECORDER

M 7700 (USA)
M 7700 (CANADA)
M 7700F (EUROPE)
M 7700F (AUSTRALIA)
M 7700F

Date May 6, 1980 Issued by

The following corrections should be made in the SERVICE MANUALS and PARTS (PRICE) LIST.

		Section	Key No.	Part No.	Description	Q'ty	Remark	Reason
1	From	Radio Tuner PCB Assy	S7	4-2319-71154	Slide Switch (R/P)	1		E
	To		S7	"	Slide Switch (Band)	1		
2	From							
	To							
3	From							
	To							

INTERCHANGEABLE NOT INTERCHANGEABLE		Serial No. Chassis No.	Effective from
Q'ty of initial production before modification.		Identification of modified unit.	

REASON FOR MODIFICATION

A ..... Standardization
B ..... Change of materials
C ..... Improvement of reliability
D ..... Improvement of performance
E ..... Miss print
F ..... Miss register
G .....

Printed in Japan 10000

SANYO ELECTRIC TRADING CO., LTD.
OSAKA, JAPAN

WM-5035